

# **Revised Fourth Quarter 2023 Groundwater Sampling and Analysis Report**

Camp Bonneville  
23201 NE Pluss Road  
Vancouver, Washington 98682

Prepared for:  
Clark County, Washington, and  
Washington State Department of Ecology

August 2024  
Revised February 2025  
PBS Project 76151.012



4412 S CORBETT AVENUE  
PORTLAND, OR 97239  
503.248.1939 MAIN  
866.727.0140 FAX  
PBSUSA.COM

## Table of Contents

<b>1</b>	<b>INTRODUCTION</b>	<b>1</b>
<b>2</b>	<b>SITE BACKGROUND</b>	<b>1</b>
2.1	Site History	1
2.2	Camp Bonneville Geology	1
<b>3</b>	<b>SITEWIDE GROUNDWATER MONITORING PROGRAM</b>	<b>2</b>
3.1	Project Objectives	2
3.2	Chemicals of Potential Concern	2
3.3	Monitoring Program Locations	3
3.3.1	Monitoring Well Information	4
3.3.2	Water Supply Well Information	4
3.3.3	Surface Water Sampling Information	4
3.4	Fourth Quarter 2023 Scope of Work	5
<b>4</b>	<b>RECENT MONITORING ACTIVITIES</b>	<b>5</b>
4.1	Sample Collection	5
4.2	Quality Assurance/Quality Control Samples	6
4.3	Deviations from SAP/QAPP	6
4.4	Investigation-Derived Waste (IDW)	6
<b>5</b>	<b>MONITORING RESULTS</b>	<b>6</b>
5.1	Base Boundary at Lacamas Creek	6
5.2	Landfill 4/Demolition Area 1	6
5.3	Drinking Water Wells	7
<b>6</b>	<b>DATA QUALITY REVIEW AND VALIDATION</b>	<b>7</b>
6.1	Data Validation	7
6.2	Presentation of Data	8
6.3	Sample Handling and Control	8
6.4	Field Quality Control Sample Assessment	8
6.4.1	Trip Blanks	8
6.4.2	Duplicates	9
6.5	Method Reporting Limits	9
6.6	Field Data Quality Assessment	9
6.7	Laboratory Quality Control Assessment	9
6.7.1	Laboratory Quality Control Samples/Indicators	9
6.7.2	Level III Data Review	10
<b>7</b>	<b>HYDROGEOLOGY DISCUSSION</b>	<b>10</b>
7.1	Base Boundary/Lacamas Creek	10
7.2	Landfill 4/Demolition Area 1	10
<b>8</b>	<b>WATER QUALITY DATA ANALYSIS</b>	<b>11</b>
8.1	Explosives Detections	11
8.2	Spatial Distribution of Perchlorate and RDX	12
8.2.1	Perchlorate	12
8.2.2	RDX	12

8.3 Perchlorate and RDX Concentration Trend Analysis ..... 12  
8.4 VOC Detections ..... 13  
**9 FUTURE ACTIVITIES ..... 14**

## Supporting Data

### FIGURES

- Figure 1. Site Vicinity
- Figure 2. Site Map
- Figure 3. Monitoring Well and Surface Water Sample Locations near Base Boundary
- Figure 4. Monitoring Well and Surface Water Sample Locations near Landfill 4
- Figure 5. Base Boundary Monitoring Well Groundwater Elevation
- Figure 6. Landfill 4 Monitoring Well Groundwater Elevation
- Figure 7. Landfill 4 Monitoring Well Perchlorate Concentration
- Figure 8. Landfill 4 Monitoring Well RDX Concentration
- Figure 9. Landfill 4 Monitoring Well Perchlorate Concentration Trend
- Figure 10. Landfill 4 Monitoring Well RDX Concentration Trend

### TABLES

- Table 1. Well Number and Construction Details
- Table 2. Field Parameters for Groundwater Samples at Base Boundary and Landfill 4/Demolition Area 1, 4th Quarter 2023
- Table 3. Constituents Detected in Groundwater, Base Boundary, 4th Quarter 2023
- Table 4. Constituents Detected in Groundwater, Landfill 4/Demolition Area 1, 4th Quarter 2023
- Table 5. Constituents Detected in Water Supply Wells, 4th Quarter 2023

### APPENDICES

- Appendix A:** List of Acronyms and Abbreviations
- Appendix B:** Groundwater Disposal Receipt and Field Forms
- Appendix C:** Historical Data
- Appendix D:** Anatek Labs, Level II Data Package
- Appendix E:** Anatek Labs, Level III Data Package
- Appendix F:** Precipitation Data
- Appendix G:** Trend Graphs
- Appendix H:** Summary Statistics

## 1 INTRODUCTION

This report documents the results of fourth quarter 2023 groundwater monitoring at the Camp Bonneville Military Reservation (Camp Bonneville) in Vancouver, Washington (Figure 1). The work was performed by PBS Engineering and Environmental LLC (PBS) under contract to Clark County (County).

Groundwater monitoring was performed in accordance with the Health and Safety Plan for Groundwater and Surface Water Monitoring Activities (HASP),<sup>1</sup> the Supplemental Groundwater and Surface Water Remedial Investigation Sampling and Analysis Plan and Quality Assurance Project Plan (SAP/QAPP),<sup>2</sup> and Amendment #1 to the SAP/QAPP.<sup>3</sup> Laboratory analytical services were provided by Anatek Labs located in Moscow, Idaho, under contract with PBS.

Acronyms used in this report are defined on first use. Please refer to Appendix A for a list of acronyms and abbreviations.

## 2 Site Background

### 2.1 Site History<sup>4</sup>

Camp Bonneville comprises approximately 3,840 acres and is in southwestern Washington, approximately 10 miles northeast of Vancouver (Figure 1). The United States Army used Camp Bonneville for live fire of small arms, assault weapons, artillery, and field and air defense artillery between 1910 and 1995. Since 1947, Camp Bonneville has also provided training for a variety of military and nonmilitary units including the National Guard; Army Reserves; Air Force; and federal, state, and local law enforcement agencies.

In July 1995, Camp Bonneville was selected for closure under the 1995 Base Realignment and Closure (BRAC) process, and transferred to the County for public benefit, education, law enforcement training, and parks. Transfer of Camp Bonneville to the Trust for Public Land, and subsequently to the County, began in 2006. On October 3, 2006, the County entered a Prospective Purchaser Consent Decree (PPCD) with the Washington State Department of Ecology (Ecology) that required investigating and remediating the site. The PPCD was updated in 2012.

Ordnance and explosive (OE) items were found within Camp Bonneville's boundaries, and removal efforts of OE were performed, with munitions of explosive concern (MEC) cleanup under Remedial Action Unit (RAU) 3 complete. Three additional RAUs also have cleanup complete and include RAU 1, RAU 2A, and RAU 2B. The historical use and storage of OE and unexploded ordnance (UXO) have impacted groundwater at Camp Bonneville, and monitoring these impacts associated with RAU 2C is the purpose of this monitoring event.

### 2.2 Camp Bonneville Geology

Camp Bonneville is situated north of the Portland Basin in the foothills of the Cascade Range. The general area consists of Eocene and Miocene volcanic and sedimentary rocks, with Holocene sedimentary rocks in valleys

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<sup>1</sup> PBS Engineering and Environmental Inc. (2017, November 16). *Health and Safety Plan for Groundwater and Surface Water Monitoring Activities*.

<sup>2</sup> PBS Engineering and Environmental Inc. (2018, February 22). *Supplemental Groundwater and Surface Water Remedial Investigation Sampling and Analysis Plan and Quality Assurance Project Plan, Remedial Action Units 2C and 3, Camp Bonneville, 23201 NE Pluss Road, Vancouver, Washington 98682*.

<sup>3</sup> PBS Engineering and Environmental Inc. (2019, March 5). *Amendment #1 – Changes to Table 4-1A and 4-1B in the Supplemental Groundwater and Surface Water Remedial Investigation Sampling and Analysis Plan and Quality Assurance Project Plan, Remedial Action Units 2C and 3, Dated February 2018, Camp Bonneville, Vancouver, Washington*.

<sup>4</sup> Shannon & Wilson. (1999). *Multi-Sites Investigation Report, Camp Bonneville, Vancouver, Washington, (Vol. 1)*. Contract No. DACA67-94-D-1014.

and areas where gravels of the Troutdale Formation can be found.<sup>5</sup> The geology at Camp Bonneville can be divided into three general areas that correspond approximately to topographic divisions.<sup>6</sup>

Lacamas Creek flows through Camp Bonneville from the northeast to southwest. The area west of Lacamas Creek comprises a series of predominantly gravelly and semi-consolidated conglomerate with scattered lenses and stringers of sand (Upper Troutdale formation). Underlying this formation and comprising the area to the north and east of Lacamas Creek are folded and faulted basalt flows, flow breccia, and pyroclastic and andesitic rocks.

The northwest portion of the site is located on a terrace where the land slopes down from the west, north, and east. Two tributaries exit ravines at the north end of the terrace and drain across the western edge to become North Fork Lacamas Creek. The terraced area likely resulted from an accumulation of material historically transported by the tributaries, contributing to the predominantly low- to medium-plasticity clay observed in the borings for the wells installed in this area. According to the boring logs in the landfill/demolition area (Landfill 4/Demolition Area 1), competent bedrock (andesite) was encountered between 440 and 460 feet above mean sea level (amsl), which is approximately 50 to 75 feet below ground surface (bgs). Subrounded and subangular gravel in the borings point to colluvial deposition of the soil.

The southwest corner of Camp Bonneville is where Lacamas Creek exits the site. The valley floor along Lacamas Creek contains unconsolidated silt, sand, and gravel valley fill, with some clay.

### 3 SITEWIDE GROUNDWATER MONITORING PROGRAM

#### 3.1 Project Objectives

The overall objectives of site investigations at Camp Bonneville have been to identify contaminated areas and determine the next appropriate steps toward their restoration. Contaminated areas at Camp Bonneville have been divided into the five previously mentioned RAUs, which are differentiated by the nature of a contaminant. This quarterly report describes the results of ongoing monitoring of RAU 2C (Landfill 4/Demolition Area 1) to assist with achieving the goal of site restoration.

Sitewide groundwater monitoring requirements are incorporated in RAU 2C and include Landfill 4/Demolition Area 1, located in the northwest portion of the site, and Base Boundary at Lacamas Creek (Base Boundary), located in the southwest portion of the site (Figure 2). Wells have been installed in these areas to monitor shallow and deeper groundwater zones to maximum depths of approximately 75 feet bgs.

#### 3.2 Chemicals of Potential Concern

Historical uses of Camp Bonneville's upgradient areas include firing ranges, landfills, open burning locations, open detonation locations, and general maintenance facilities. Chemicals of potential concern (COPCs) include artillery propellants, high explosives residue, missile/rocket propellants, petroleum hydrocarbons, semi-volatile organic compounds (SVOCs), volatile organic compounds (VOCs), and metals. A summary of COPCs is provided in the SAP/QAPP, along with specific analytes and laboratory analysis methods, sample container types, preservation techniques, holding times, and data quality objectives (DQOs).

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<sup>5</sup> Phillips, W.M. (1987). [Map]. Geologic Map of the Vancouver Quadrangle, Washington and Oregon: Washington Division of Geology and Earth Resources Open File Report 87-10, scale 1:100,000.

<sup>6</sup> Otak, Inc. (September 1998, 2nd Revision, 2005, November 15). *Camp Bonneville Reuse Plan*. Prepared for The Camp Bonneville Local Redevelopment Authority (LRA).

Results from long-term monitoring indicate analysis for specific COPCs is warranted to assess contaminant levels throughout Camp Bonneville and to determine if impacts are leaving the site. For RAU 2C (analyzed at Landfill 4/Demolition Area 1 and Base Boundary), the COPC list for quarterly monitoring is as follows:

- Explosives by Environmental Protection Agency (EPA) Method 8330
- Perchlorate by EPA Method 6850
- VOCs by EPA Method 8260
- Field measurements of temperature, specific conductivity, dissolved oxygen (DO), pH, oxidation reduction potential (ORP), turbidity, and depth to water levels

For each quarter, analysis for the following COPCs occurs at three on-site water supply wells:

- Explosives by EPA Method 8330
- Perchlorate by EPA Method 6850
- VOCs by EPA Method 8260
- Field measurements of temperature, specific conductivity, DO, pH, and ORP

In the third quarter of each year, three surface water samples are collected to determine if groundwater is impacting surface water at the site. The COPC list for the surface water samples is as follows:

- 1,3,5-Trinitro-1,3,5-triazinane (RDX) by EPA Method 8330
- Perchlorate by EPA Method 6850
- Field measurements of temperature, specific conductivity, DO, pH, ORP, and turbidity
- Observations of stream conditions are noted on the field form

Two additional surface water locations will be added beginning in the third quarter of 2024. The first location will be approximately 150 feet directly west of L4-MW11B, and the second at the confluence of North Fork Lacamas Creek and the unnamed stream north of L4-MW04A.

In the fourth quarter of each year, analysis for the following additional COPCs occurs at the Base Boundary wells:

- Priority pollutant metals by EPA Methods 6020/7470
- SVOCs by EPA Method 8270

Beginning in the first quarter 2024, and every quarter thereafter, observation and sampling of up to three seep locations will be conducted. Analysis for the following COPCs will occur if seeps are observed:

- Explosives by EPA Method 8330
- Perchlorate by EPA Method 6850
- VOCs by EPA Method 8260
- Field measurements of temperature, specific conductivity, DO, pH, and ORP

### 3.3 Monitoring Program Locations

The current RAU 2C Camp Bonneville monitoring program requires groundwater sampling and analysis for 28 monitoring wells, shown on Figure 3 (Base Boundary) and Figure 4 (Landfill 4/Demolition Area 1). In addition, three water supply wells are sampled quarterly (Figure 2), and three surface water locations are sampled annually. At the request of Ecology on February 6, 2024, and July 18, 2024, two additional surface water locations will be added to the sampling program, and each quarter will include observation and sampling of seeps near Landfill 4/Demolition Area 1.

### 3.3.1 Monitoring Well Information<sup>7</sup>

Over the years, different numerical designations have been assigned to monitoring wells at the investigation areas. PBS uses the numbering system assigned by the US Army Center for Health Promotion and Preventive Medicine (CHPPM) in prior remedial investigation (RI) reports. Table 1 provides well information, including the monitoring well numbers used by PBS, Ecology well tag numbers, and well identification numbers for the Base Boundary and Landfill 4/Demolition Area 1 wells. The table also identifies the investigation area for each well along with total depth, screened interval, and top-of-casing elevation.

The monitoring wells located at Base Boundary and Landfill 4/Demolition Area 1 are listed below (S or A = shallow well; D or B = deeper well) according to the CHPPM numbers.

- Base Boundary
  - Paired Monitoring Wells: LC-MW01S and LC-MW01D
  - Paired Monitoring Wells: LC-MW02S and LC-MW02D
  - Paired Monitoring Wells: LC-MW03S and LC-MW03D
  - Paired Monitoring Wells: LC-MW04S and LC-MW04D
  - Paired Monitoring Wells: LC-MW09S and LC-MW09D
- Landfill 4/Demolition Area 1
  - Monitoring Well L4-MW17
  - Monitoring Well L4-MW18
  - Paired Monitoring Wells: L4-MW01A and L4-MW01B
  - Paired Monitoring Wells: L4-MW02A and L4-MW02B
  - Paired Monitoring Wells: L4-MW03A and L4-MW03B
  - Monitoring Well L4-MW04A
  - Monitoring Well L4-MW05A
  - Monitoring Well L4-MW07B
  - Paired Monitoring Wells: L4-MW08A and L4-MW08B
  - Paired Monitoring Wells: L4-MW09A and L4-MW09B
  - Paired Monitoring Wells: L4-MW10A and L4-MW10B
  - Monitoring Well L4-MW11B

### 3.3.2 Water Supply Well Information

The three water supply wells are named after their location at Camp Bonneville as follows:

- Bonneville located at the Bonneville cantonment
- Killpack located at the Killpack cantonment
- Range Road located at the Federal Bureau of Investigation (FBI) firing range on Range Road

### 3.3.3 Surface Water Sampling Information

PBS retained the surface water sample location and numbering that was used for a 2012 EPA investigation.<sup>8</sup> Three surface water sample locations are monitored annually during the third quarter groundwater monitoring event, as follows:

- NF02 (North Fork of Lacamas Creek, approximately 1,000 feet south of Landfill 4/Demolition Area 1)
- LC15 (Lacamas Creek at the confluence with the North Fork)
- LC03 (Lacamas Creek approximately 300 feet north of well LC-MW01S, at the property boundary)

<sup>7</sup> PBS Engineering and Environmental Inc. (2004b, August 16). *Monitoring Well Installation Report, Landfill 4/Lacamas Creek: Camp Bonneville, Vancouver, Washington.*

<sup>8</sup> Ecology and Environment, Inc. (May 2012). *Camp Bonneville Expanded Site Inspection, Vancouver, Washington, Technical Direction Document Number: 11-02-0010.*

PBS will include two additional surface water monitoring locations beginning in the third quarter 2024. These locations will be called NF10 due west of monitoring well L4-MW05A, and US01 north of L4-MW04A in the unnamed stream.

### 3.4 Fourth Quarter 2023 Scope of Work

Monitoring activities include the following:

- Depth to water measurements from the currently sampled monitoring well network
- Collection and analysis of groundwater samples from all wells in Landfill 4/Demolition Area 1 and Base Boundary
- Collection and analysis of groundwater samples from three water supply wells, one each at the Bonneville and Killpack cantonments, and one from the Range Road

This monitoring is conducted in accordance with the project SAP/QAPP. The analytical results obtained from quarterly monitoring are compared with cleanup levels established by Ecology under the Model Toxics Control Act (MTCA)<sup>9</sup> to determine if the groundwater potentially poses an unacceptable environmental risk to human health or the environment. All data are stored in an Earthsoft Environmental Quality Information System (EQIS) electronic database that includes data from 2003 to present.

## 4 RECENT MONITORING ACTIVITIES

Groundwater samples were collected from the 10 monitoring wells located at Base Boundary (Figure 3) on November 27, 28 and 29, 2023. A field duplicate sample (labeled 04Q23LCMW140W) was collected from monitoring well LC-MW02S. An additional volume of groundwater was collected from monitoring well LC-MW02D for laboratory matrix spike/matrix spike duplicate (MS/MSD) analysis.

Groundwater samples were collected from 18 monitoring wells at Landfill 4/Demolition Area 1 (Figure 4) on November 29 and 30 and December 1, 2023. Two field duplicate samples (labeled 04Q23L4MW145W and 04Q23L4MW150W) were collected from monitoring wells L4-MW02A and L4-MW2B respectively. An additional volume of groundwater was collected from monitoring well L4-MW18 for MS/MSD analysis.

Water supply well samples were collected from Bonneville, Killpack and Range Road. A duplicate sample (labeled 04Q23DUPW) was collected at well Range Road. An additional volume of groundwater was collected from well Killpack for MS/MSD analysis. All initial depth to water levels were measured on November 27, 2023.

Samples were collected in new laboratory-supplied sample containers directly from the end of the dedicated pump discharge hose. Groundwater samples requiring preservatives were collected in sample bottles filled with the appropriate amounts of preservative solution by the contract laboratory.

The locations were sampled in accordance with the procedures established in the SAP/QAPP. Additional sampling details are provided below.

### 4.1 Sample Collection

A low-flow, minimal-drawdown technique was employed for monitoring well groundwater purging and sampling using dedicated Solinst bladder pumps constructed of a polyvinyl chloride (PVC) or stainless-steel body and a Teflon bladder. The low-flow purging technique is described in the SAP/QAPP. Low-flow sampling

<sup>9</sup> <http://apps.leg.wa.gov/WAC/default.aspx?cite=173-340>

minimizes disturbance to the aquifer and is designed to ensure that representative samples are collected from the wells.

Water supply well sample collection occurred following purging the wells for 5 minutes, then collecting samples directly from the closest spigot to the well.

#### **4.2 Quality Assurance/Quality Control Samples**

Duplicate samples were collected at a frequency of at least one per every 10 samples and at least one area, with one collected from Base Boundary, two from Landfill 4/Demolition Area 1, and one from water supply wells. MS/MSD samples were collected at a frequency of at least one per every 20 samples and one per area. Trip blanks were submitted with all shipments containing samples for VOC analysis. Dedicated pumps in the wells at Base Boundary and Landfill 4/Demolition Area 1 and the water supply wells eliminate the need for equipment blanks.

#### **4.3 Deviations from SAP/QAPP**

This section is intended to discuss deviations from established protocols as well as to note unusual conditions or equipment issues encountered. There were no deviations from established protocols this quarter.

#### **4.4 Investigation-Derived Waste (IDW)**

Gloves and other disposable field supplies were disposed as solid waste. Purged groundwater was placed in 55-gallon drums that were sealed, labeled, and placed in the maintenance shed area. The drums were picked up on November 11, 2023, and transported to US Ecology in Portland, Oregon, for disposal. A copy of the disposal receipt can be found in Appendix B.

### **5 MONITORING RESULTS**

Fourth quarter results are discussed below. Field forms are included in Appendix B. Historical results from 2003 to the present are presented in Appendix C.

#### **5.1 Base Boundary at Lacamas Creek**

Groundwater elevations and field parameters for the fourth quarter 2023 are provided in Table 2. Figure 5 illustrates groundwater contours and flow direction for the Base Boundary shallow and deep wells.

Table 3 summarizes analytical results for the contaminants of concern (COCs) at Base Boundary. Fourth quarter analyses include priority pollutant metals and SVOCs. Of the 10 wells in the Base Boundary area, there were no COCs detected above the laboratory method reporting limits (MRLs). Results are summarized in Table 3.

#### **5.2 Landfill 4/Demolition Area 1**

Groundwater elevations and field parameters for the fourth quarter 2023 are provided in Table 2. Figure 6 illustrates groundwater contours and flow direction for the Landfill 4 shallow and deep wells.

Wells L4-MW17 and L4-MW18 are located topographically downgradient from the Landfill 4 area and are not included in groundwater flow discussion. Monitoring well L4-MW07B is screened in the same area of the aquifer as the other deep wells at the Landfill 4 area (above bedrock) and is included in the deep groundwater flow discussion.

Table 4 summarizes analytical results for the COCs at Landfill 4/Demolition Area 1.

Of the 18 wells in the Landfill 4/Demolition Area 1 area, 13 had one or more detections of perchlorate or RDX that exceeded MTCA Method B cleanup levels (see Table 4), and 5 wells had VOC detections. The following details of the results are observed:

- Perchlorate was detected in 13 of 18 wells, with a maximum concentration of 575 µg/L in well L4-MW11B.
- RDX was detected in 12 of 18 wells, with a maximum concentration of 65.2 µg/L in well L4-MW11B.
- The wells with VOC detections had maximum concentrations as follows:
  - 2.54 µg/L of acetone in well L4-MW08A
  - 2.81 µg/L of 1,1,1-trichloroethane in well L4-MW10B
  - 0.60 µg/L of 1,1,2,2-tetrachloroethane in well L4-MW09B (above MTCA Method B cleanup level of 0.220 µg/L)
  - 5.72 µg/L of 1,1-dichloroethane in well L4-MW10B
  - 4.76 µg/L of 1,1-dichloroethene in well L4-MW10B
  - 27.2 µg/L of dichlorodifluoromethane in well L4-MW10B.

Monitoring well L4-MW08A had a detection of acetone above the laboratory MRL. The detection of acetone is a laboratory contaminant and therefore was not counted in total VOC detections. Section 6.6 discusses the source of external contamination, and this detection is not representative of aquifer conditions. The results are discussed further in Section 8.

### 5.3 Drinking Water Wells

Table 4 summarizes analytical results for the COCs at the drinking water wells. There were no detections above MRLs in the three analyzed samples.

## 6 DATA QUALITY REVIEW AND VALIDATION

The overall DQO is to provide data of known and sufficient quality to evaluate the physical extent and concentration ranges of COPCs from analysis of groundwater samples, and to assure compliance with environmental and health-related agencies. DQOs for laboratory analysis are presented in the SAP/QAPP. Laboratory analytical data were evaluated with respect to quality assurance objectives for precision, accuracy, representativeness, comparability, and completeness. The fourth quarter data met the following criteria:

- Analytical data were received from the laboratory in an electronic data deliverable (EDD) format that was imported into an electronic database
- Qualifiers from the laboratory were included as well as any qualifiers resulting from data validation procedures conducted by PBS
- The project specifications were met for all analytes, indicating that the sampling and analysis procedures were reproducible
- The laboratory report narratives state that all quality control parameters that affect sample analysis were met, except as noted in Section 6.7 below.

### 6.1 Data Validation

All analytical data were validated at a Level II review standard. Level II validation and reporting includes a brief narrative of the laboratory data along with presentation of the sample results and related quality assurance/quality control (QA/QC) analyses. Additionally, at least 20% of the analytical data (9 of 38 samples) were validated at a Level III review standard. Level III validation adds the following list to the reporting (not all method requirements are applicable to each analysis in this sampling event):

- Internal standards
- Blank association
- Serial dilution results
- Post-digestion spike results
- Gas chromatography/mass spectrometer (GC/MS) tune table
- Initial calibration table
- Continuing calibration verifications
- Calibration blanks
- Column confirmation
- Instrument run log
- Interference check solution A/interference check solution AB (ICSA/AB), contract required detection limit (CRDL), method detection limit/instrument detection limit (MDL/IDL) form

These data validation levels follow the criteria in the EPA's *Data Quality Objectives for Remedial Response Activities Development Process*,<sup>10</sup> National Technical Information Service.

## 6.2 Presentation of Data

Samples were collected over five days with four sample submissions. Samples were placed in five sample delivery groups (SDGs) by Anatek. The SDGs were processed as a Level II data package. Anatek provided a Level III data package for the five methods analyzed during this sampling event (EPA Method 6020B, EPA Method 6850, EPA Method 8260D, EPA Method 8270E, EPA Method 8330B) and provided the data as individual reports per method. The following SDGs were processed by Anatek:

- MDK0709
- MDK0735
- MDL0022
- MDL0102
- MDL0103

Laboratory reports are included on an electronic storage device with the printed fourth quarter report and are in the electronic version of the report. The Level II data packages are found in Appendix D, and the Level III data packages are found in Appendix E.

## 6.3 Sample Handling and Control

The chain-of-custody forms indicate that samples were maintained under proper custody. Forms were signed upon release from the field and receipt at the laboratory. Samples were received by the laboratory at temperatures within acceptable limits and with proper preservation. All reported analytical results were performed within applicable method-specified holding times.

## 6.4 Field Quality Control Sample Assessment

### 6.4.1 Trip Blanks

Trip blanks and groundwater samples for VOC analysis were consolidated daily into one cooler for shipment to the laboratory. Trip blanks were included on November 28, 29, 30, and December 1, 2023. All trip blanks were analyzed for VOCs and there were no detections.

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<sup>10</sup> Environmental Protection Agency (EPA). (1987b). *Data Quality Objectives for Remedial Response Activities-Development Process*. EPA/540/G-87/003, OSWER Directive 9355.07B, EPA, Washington, DC (PB88-131370).

## 6.4.2 Duplicates

Duplicate samples were collected from the three study areas (Base Boundary, Landfill 4/Demolition Area 1, water supply wells). These samples were analyzed for the same constituents as the source samples.

The relative percent difference (RPD) was calculated as the difference between the values divided by the average of the values. For samples with results greater than five times the practical quantitation limit (PQL), an RPD of less than 20% is considered good duplication. For samples with results less than five times the PQL, the difference between the sample and its duplicate must be less than the PQL to meet the quality assurance acceptance criteria. A significant difference between duplicate values for a few parameters would indicate potential problems with the precision of specific analyses. A significant difference for many parameters would indicate potential problems with the sample collection procedures. The following are the results of duplicate sampling for this event:

- **Base Boundary at Lacamas Creek Duplicate**  
The field duplicate analysis for well LC-MW02S met quality control requirements.
- **Landfill 4/Demolition Area 1 Duplicate**  
The field duplicate analyses for wells L4-MW02A and L4-MW02B met quality control requirements.
- **Water Supply Well Duplicate**  
The field duplicate analysis for well Range Road met quality control requirements.

## 6.5 Method Reporting Limits

All samples either met laboratory specified MRLs as presented in the project SAP/QAPP or were detected with elevated MRLs due to high analyte concentrations.

## 6.6 Field Data Quality Assessment

There are no specific DQOs for the measurement of field parameters (temperature, pH, ORP, conductivity, DO, and turbidity). Temperature, pH, ORP, conductivity, and DO were measured during purging. Turbidity was measured during sample collection. The PBS standard operating procedure (SOP) for low-flow groundwater sampling describes the acceptable criteria for the measurement of field parameters. A copy of the SOP is provided in the SAP/QAPP.

Acetone was detected in sample 04Q23L4MW08AW at a concentration of 2.54 µg/L versus a reporting limit of 2.50 µg/L. Based on the low detection so close to the reporting limit, and that acetone is a common laboratory contaminant, the detection is not expected to represent aquifer conditions and to be from an outside source.

## 6.7 Laboratory Quality Control Assessment

The analytical data quality evaluations performed by Anatek Labs are presented in the laboratory analysis reports in Appendix D and Appendix E (provided on the enclosed electronic storage device). Analytical results requiring qualification are flagged by the laboratory with codes describing data quality anomalies. Case narratives describing sample receipt, identification, and general comments by laboratory personnel are included in each report.

### 6.7.1 Laboratory Quality Control Samples/Indicators

#### 6.7.1.1 Blanks

There were no detections of target compounds in the method blanks for analyses reported for this sampling event.

#### 6.7.1.2 Laboratory Control Samples

Laboratory control sample (LCS) recoveries were within specified control limits. The LCS and laboratory control sample duplicate (LCSD) RPD was within control limits for all analytes, except for tetrachloroethylene in batch BDL0196 that recovered above the upper control limits (biased high). MS/MSD recoveries were within control limits, and the associated samples were non-detect for the affected analytes; therefore, the data are considered accurate and valid.

The laboratory notes that the sample (L4-MW08A) had an acetone detection just above the MRL, while the previous sample (L4-MW08B) and the trip blank associated with this SDG are both below the reporting limit. The detection is considered a trace amount, just above the reporting limit of 2.5 µg/L, and not representative of aquifer conditions.

#### 6.7.1.3 *Matrix Spike/Matrix Spike Duplicates*

MS/MSD recoveries and RPDs for MS/MSD pairs were within specified control limits for all analytes requiring MS/MSD analysis. The data are considered accurate and valid.

#### 6.7.1.4 *Surrogates*

Surrogate recoveries from VOC, SVOC, and explosives analyses were within specified control limits, except for phenol-2,3,4,5,6-d5 in sample 04Q22LCMW09DW that recovered above the upper control limit (biased high). The sample was non-detect for the affected analytes; therefore, the data are considered accurate and valid.

#### 6.7.1.5 *Internal Standards*

Internal standard issues were not noted in the SDGs.

### 6.7.2 **Level III Data Review**

The data package for the SDGs receiving Level III data reporting was reviewed for adherence to method criteria that exceed Level II reporting. There were no deviations from method criteria.

## 7 **HYDROGEOLOGY DISCUSSION**

### 7.1 **Base Boundary/Lacamas Creek**

The fourth quarter 2023 shallow and deep monitoring well groundwater contours are shown on Figure 5. Shallow (S) wells have screen intervals between 15 and 20 feet bgs with 5-foot length screens, and deep (D) wells have screen intervals between 30 and 40 feet bgs with 10-foot length screens. Well pairs have demonstrated a downward vertical gradient for measurements available in the EQUIS database (since 2008 or the wells' installation), except for well pair LC-MW09S/LC-MW09D, which did not have a vertical gradient in September 2018. The calculated groundwater flow direction is to the west-northwest, which is consistent with historical trends.

### 7.2 **Landfill 4/Demolition Area 1**

The wells near and within the Landfill 4/Demolition Area 1 area are illustrated in Figure 4. The hydrogeology discussion for this area includes six pairs of nested wells in A/B pairs, shallow wells L4-MW04A and L4-MW05A, and deep wells L4-MW07B and L4-MW11B. Wells L4-MW17 and L4-MW18 are considered sentinel wells and not included in the following discussion.

Groundwater elevations and contours are shown on Figure 6 in support of the following groundwater observations:

- For the eight wells in grouping A, there is a consistent high groundwater elevation in upgradient eastern well L4-MW01A and a westerly groundwater flow direction. From there, groundwater demonstrates a divergent radial flow pattern, generally following the topographic contour, from the

northwest (toward L4-MW04A) to southwest (toward well L4-MW05A) directions, which is consistent with historical trends.

- For the eight wells in grouping B, there is a consistent high groundwater elevation in upgradient eastern well L4-MW01B. Groundwater flow direction is primarily to the west with slight fluctuations from the west-northwest to west-southwest and is consistently toward North Fork Lacamas Creek. Groundwater flow is primarily south-southwest (toward L4-MW07B) of the main Landfill 4/Demolition Area 1 area, which is consistent with historical trends.
- The well pairs demonstrated vertical gradients as follows:
  - L4-MW01A/L4-MW01B: Upward (since second quarter 2008)
  - L4-MW02A/L4-MW02B: Downward (since second quarter 2008)
  - L4-MW03A/L4-MW03B: Downward (since second quarter 2008)
  - L4-MW08A/L4-MW08B: Downward (since installation in third quarter 2017)
  - L4-MW09A/L4-MW09B: Downward (since installation in third quarter 2017)
  - L4-MW10A/L4-MW10B: Downward (since installation in third quarter 2017)

## 8 WATER QUALITY DATA ANALYSIS

The laboratory results for COCs were compared to previous quarterly monitoring events, along with groundwater elevation, to identify trends in the data. The monitoring events included in the trend analysis cover the period of March 2017 to present for Base Boundary and Landfill 4/Demolition Area 1. Data from December 2003 to present are currently available in the EQUS database for specific COCs; however, this section focuses on recent trends only. These monitoring events encompass the range of seasonal climatic (precipitation and temperature) and groundwater level variations.

Precipitation data for the preceding two weeks to the sampling event were examined and a total of 1.36 inches were recorded at "location", which is 8.27 miles from Camp Bonneville. Precipitation at this location (WASHOUGAL 3.7 NNW, WA US US1WACK0027) is expected to approximate Camp Bonneville precipitation data. An increase in precipitation is expected to increase flow in the site's surface water stream system and cause a delayed influence in a rise in groundwater elevations. Precipitation data can be found in Appendix F.

The Base Boundary monitoring well samples have had no detections above laboratory MRLs since March 1, 2019. Wells with a detection in 2019 were resampled within one month from the original sampling event and the detections were not reproduced. These detections are considered outliers and due to laboratory error. A different laboratory was used following the 2019 Base Boundary detections and explosives have not been detected since the switch; therefore, these locations are not included in this trend discussion.

Groundwater concentration trends for Landfill 4/Demolition Area 1 are discussed below. Analytical results are discussed for 16 wells in the Landfill 4/Demolition Area 1 area.

### 8.1 Explosives Detections

The explosives 2,4,6-trinitrotoluene, 2,4-dinitrotoluene, HMX, and RDX, and perchlorate were detected in the Landfill 4/Demolition Area 1 area during this sampling event. 2,4,6-Trinitrotoluene and 2,4-dinitrotoluene were only detected in well L4-MW02B, with 2,4-dinitrotoluene detected above the MTCA Method B cleanup level of 0.28 µg/L at a concentration of 0.336 µg/L. There is a statistically significant negative trend of this compound in well L4-MW02B, which means the maximum concentration has been reached and this compound is not an accurate indicator of risk at the site. Perchlorate and RDX were also detected above MTCA Method B cleanup levels and are discussed further.

## 8.2 Spatial Distribution of Perchlorate and RDX

Perchlorate and RDX are the only two compounds consistently detected above MTCA Method B cleanup levels in multiple wells in the Landfill 4/Demolition Area 1 area. Isocontours of perchlorate concentrations in shallow (A) and deep (B) wells are illustrated in Figure 7, and isocontours of RDX concentrations in shallow and deep wells are illustrated in Figure 8.

### 8.2.1 Perchlorate

The highest perchlorate concentration in shallow wells is located at well L4-MW09A and decreases in all directions. The highest perchlorate concentration in deep wells is located at well L4-MW11B, with upgradient well L4-MW02B having the second-highest concentration and wells to the north (L4-MW09B, L4-MW10B) having higher concentrations than those south (L4-MW03B) or east (L4-MW01B). The shallow and deep groundwater flow direction near these wells is generally to the west with a southwest component near wells L4-MW02A/B.

### 8.2.2 RDX

The highest RDX concentration in shallow wells is located at well L4-MW08A. Shallow groundwater flow near well L4-MW08A is generally toward well L4-MW04A, and RDX concentrations have generally demonstrated an increasing trend in well L4-MW04A. The highest RDX concentration in deep wells is located at well L4-MW11B, with upgradient well L4-MW09B having the second-highest concentration.

## 8.3 Perchlorate and RDX Concentration Trend Analysis

Trend graphs for available perchlorate and RDX concentrations from 2003 to present are included in Appendix G. The trend charts are provided as one chart each for perchlorate and RDX in shallow (A) and deep (B) wells (four charts total), and per-well charts with perchlorate, RDX, and groundwater elevation shown. Wells must have at least two detections above the MRL for that analyte to be graphed.

The MTCA Method B cleanup levels are 11.0 micrograms per liter ( $\mu\text{g/L}$ ) for perchlorate and 1.10  $\mu\text{g/L}$  for RDX. Please note that Ecology requests that graphs showing wells with detections need to also include data points for non-detections in those wells, recorded as one-half the MRL for that analyte.

Data from 2015 to present were examined for statistically significant trends by using a Mann-Kendall trend analysis in ProUCL version 5.1. Data were imported into ProUCL directly from EQuIS with non-detect data at the reporting limit. RDX was not detected over this time interval in wells L4-MW01B and L4-MW07B, so is not included in this discussion.

The Mann-Kendall trend analysis was performed with the null hypothesis that an upward or downward trend is not present in the data, and with the alternate hypothesis that a trend exists. The data are analyzed by comparing every new value with every preceding value to see if there are consistent increasing or decreasing trends within a set level of confidence. If the analysis is above the set level of confidence, the null hypothesis is rejected; otherwise, a trend cannot be determined.

The following wells demonstrated a statistically significant increasing trend at a 95% confidence level:

#### Perchlorate

- L4-MW04A
- L4-MW11B

#### RDX

- L4-MW04A
- L4-MW08B
- L4-MW10B
- L4-MW11B

The following wells demonstrated a statistically significant decreasing trend at a 95% confidence level:

**Perchlorate**

- L4-MW01B
- L4-MW02B
- L4-MW03A
- L4-MW03B
- L4-MW05A
- L4-MW07B
- L4-MW08A
- L4-MW09A
- L4-MW09B

**RDX**

- L4-MW02A
- L4-MW02B
- L4-MW03A
- L4-MW03B
- L4-MW05A
- L4-MW08A
- L4-MW09A
- L4-MW09B
- L4-MW10A

The following wells did not demonstrate a statistically significant trend over the analyzed time interval:

**Perchlorate**

- L4-MW01A
- L4-MW02A
- L4-MW08B
- L4-MW10A
- L4-MW10B

**RDX**

- L4-MW01A

There are no apparent correlations between perchlorate or RDX concentrations in groundwater and seasonal variations in groundwater elevations in the wells sampled at Landfill 4/Demolition Area 1. Trend data are visually presented in Figures 9 and 10 for perchlorate and RDX respectively. Summary statistics are presented in Appendix H.

#### 8.4 VOC Detections

VOCs were detected in four wells at Landfill 4/Demolition Area 1. The acetone detection in well L4-MW08A, as discussed in section 6.7.1.2, is not considered representative of aquifer conditions and a laboratory artifact. Detections were below MTCA Method B cleanup levels, except for 1,1,2,2-tetrachloroethane in well L4-MW09B, which was detected at a concentration of 0.60 µg/L, above the MTCA Method B cleanup level of 0.22 µg/L. There is a statistically significant negative trend of this compound in the well, which means the maximum concentration has been reached and this compound is not an accurate indicator of risk at the site. Summary statistics are presented in Appendix H.

## 9 FUTURE ACTIVITIES

The next scheduled sampling event occurred in the first quarter of 2024.

PBS Engineering and Environmental LLC is pleased to present the results of the fourth quarter 2023 groundwater sampling event. Please contact the undersigned if there are any questions.

Sincerely,  
PBS Engineering and Environmental LLC

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Samantha Eckes, LG  
Project Geologist

Date

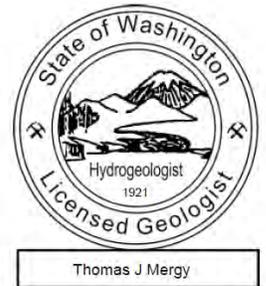
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Scott Braunsten, LG  
Senior Geologist

Date

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Thomas Mergy, LHG  
Principal Hydrogeologist



# Figures

Figure 1. Site Vicinity

Figure 2. Site Map

Figure 3. Monitoring Well and Surface Water Sample Locations near Base Boundary

Figure 4. Monitoring Well and Surface Water Sample Locations near Landfill 4

Figure 5. Base Boundary Monitoring Well Groundwater Elevation

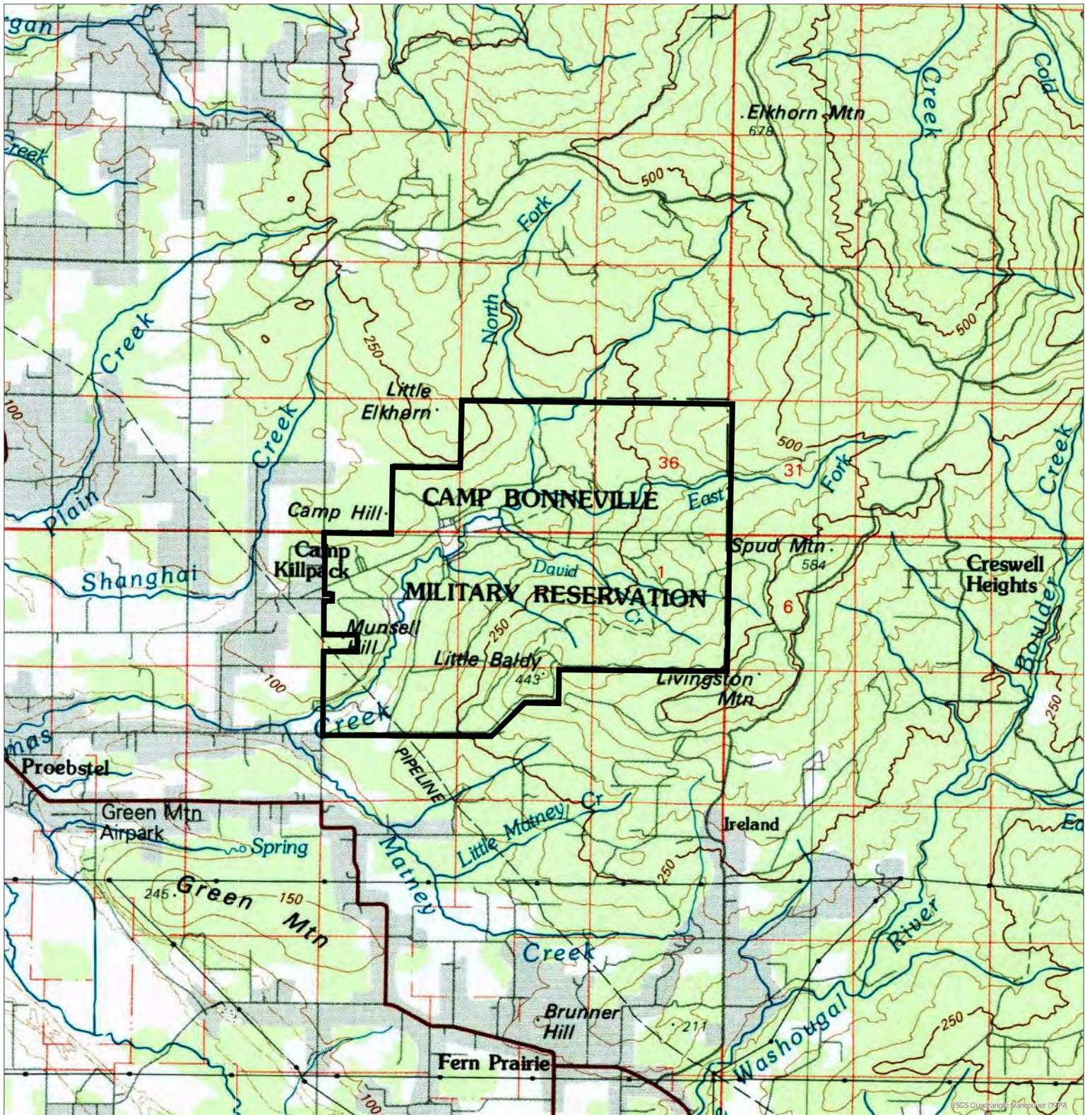
Figure 6. Landfill 4 Monitoring Well Groundwater Elevation

Figure 7. Landfill 4 Monitoring Well Perchlorate Concentration

Figure 8. Landfill 4 Monitoring Well RDX Concentration

Figure 9. Landfill 4 Monitoring Well Perchlorate Concentration Trend

Figure 10. Landfill 4 Monitoring Well RDX Concentration Trend



## Site Vicinity

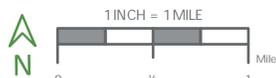
4th Quarter 2023

23201 NE Pluss Road, Vancouver, Washington

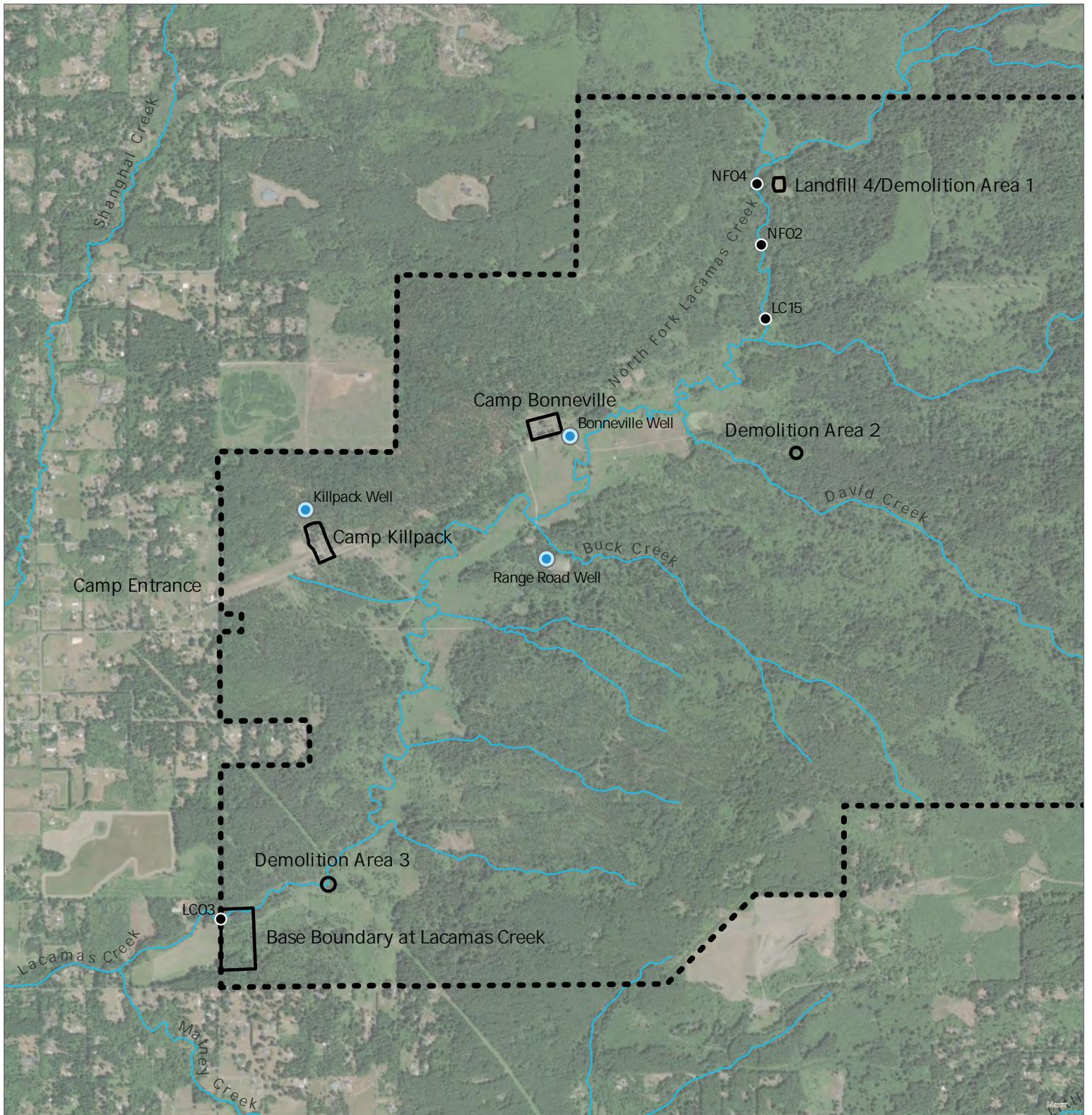
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Figure: 1

 Site Boundary



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## Site Map

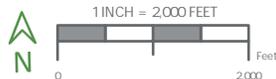
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23201 NE Pluss Road, Vancouver, Washington

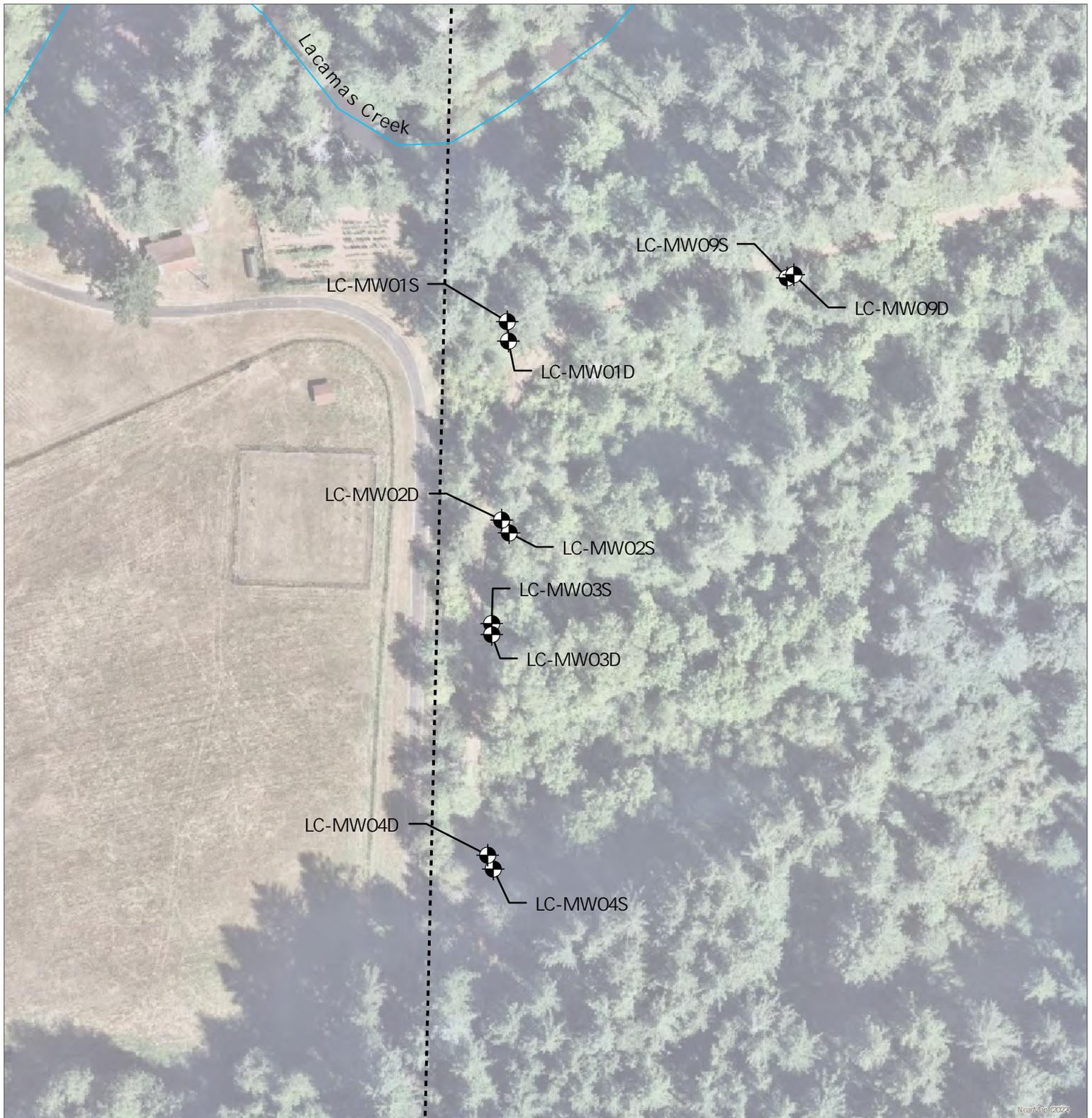
Date: August 2024 | Project: 76151.012

Figure: 2

- Surface Water Sample Location
- Water Supply Well
- Waterway
- ▭ Camp Bonneville Area
- ⋯ Site Boundary



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## Monitoring Wells and Surface Water Sample Locations Near Base Boundary

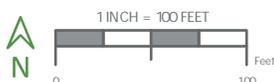
4th Quarter 2023

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Figure: 3

-  Monitoring Well Location
-  Waterway
-  Site Boundary



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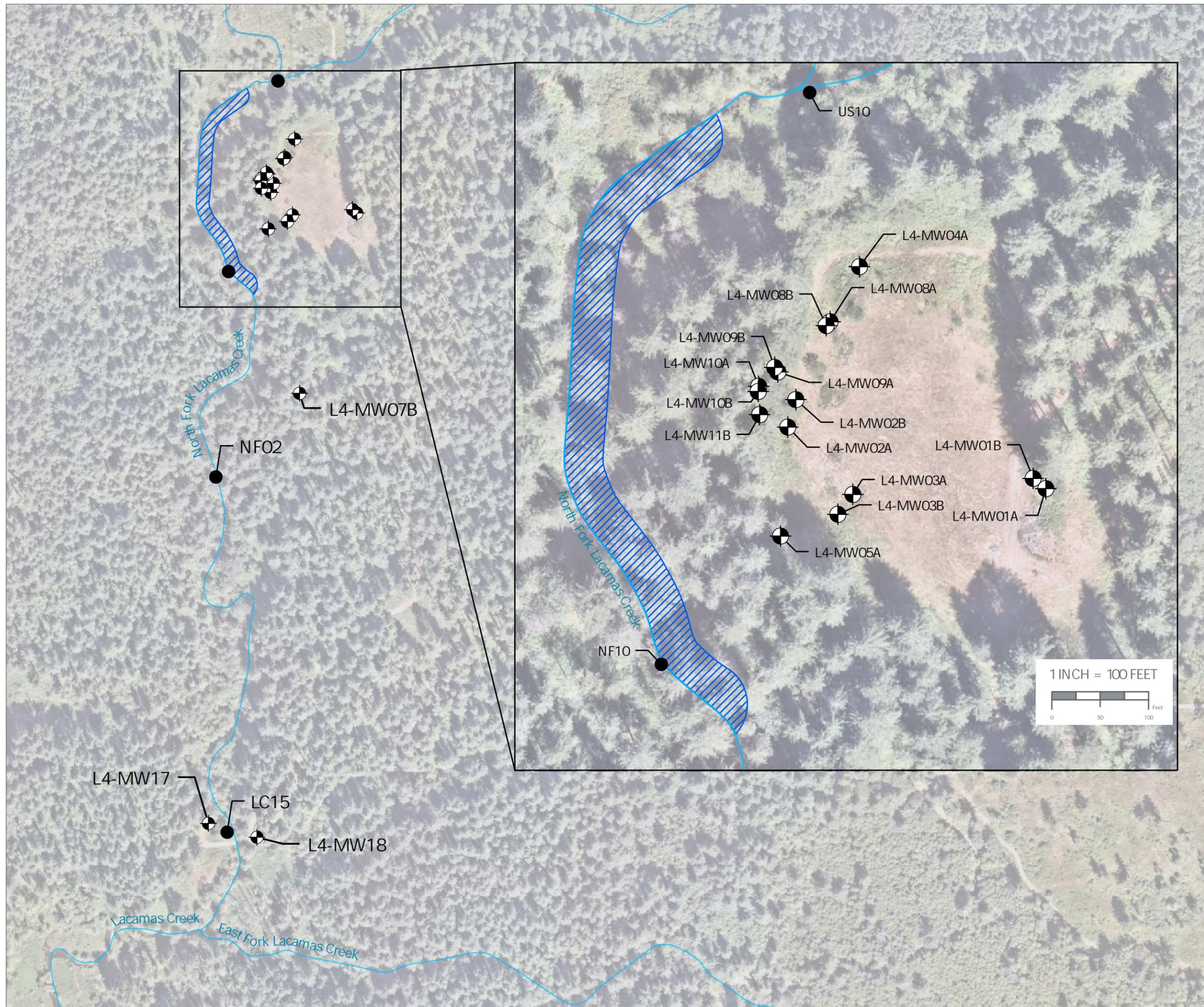
# Monitoring Wells and Surface Water Sample Locations near Landfill 4

4th Quarter 2024

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Figure: 4

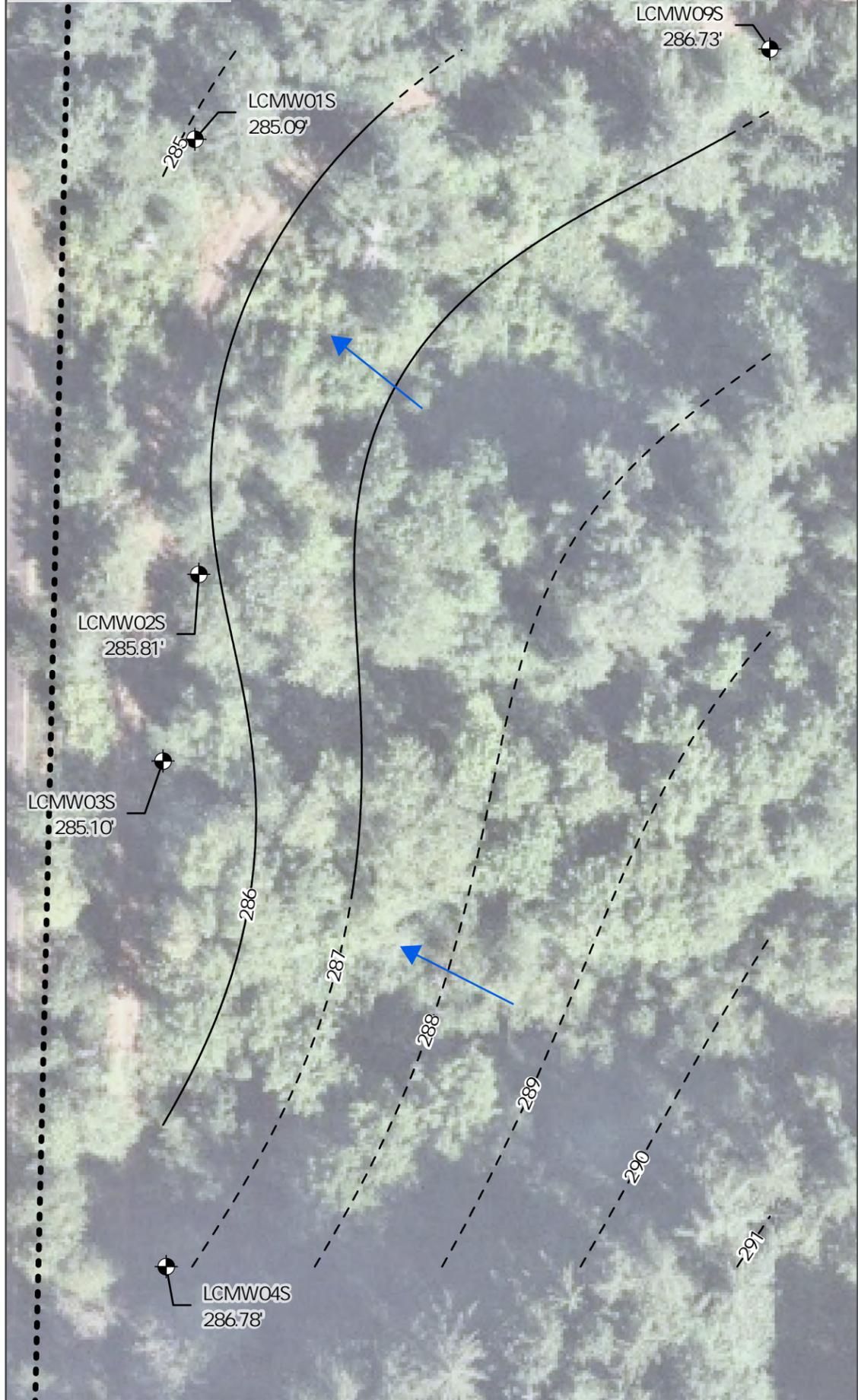


- Groundwater Monitoring Well
- Surface Water Sample Location
- Waterway
- Seep Observation Area

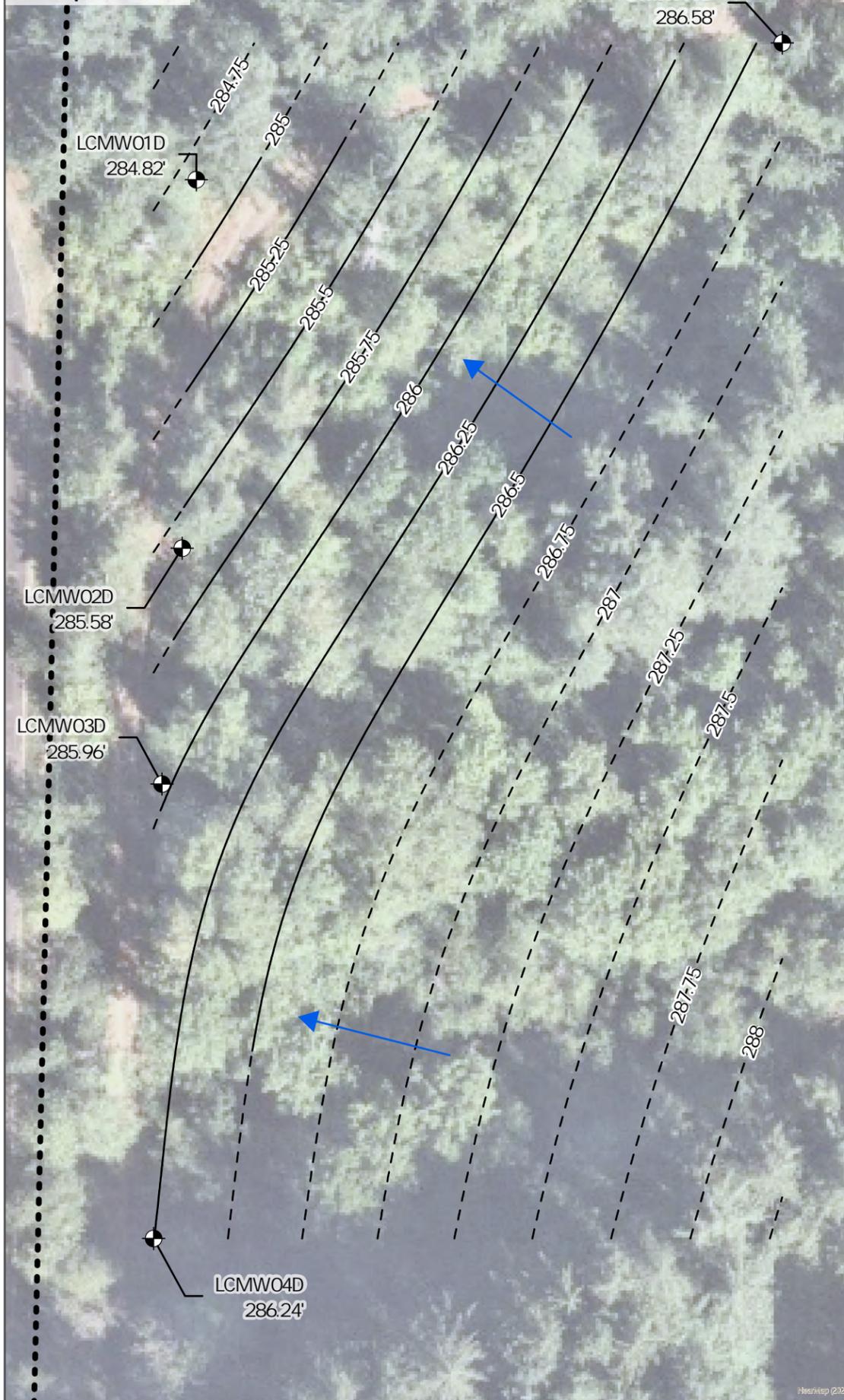


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## Shallow Wells



## Deep Wells



# Base Boundary Monitoring Well Groundwater Elevation

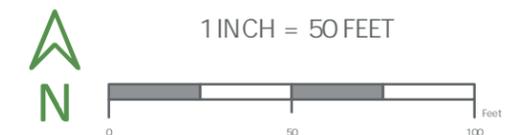
4th Quarter 2023

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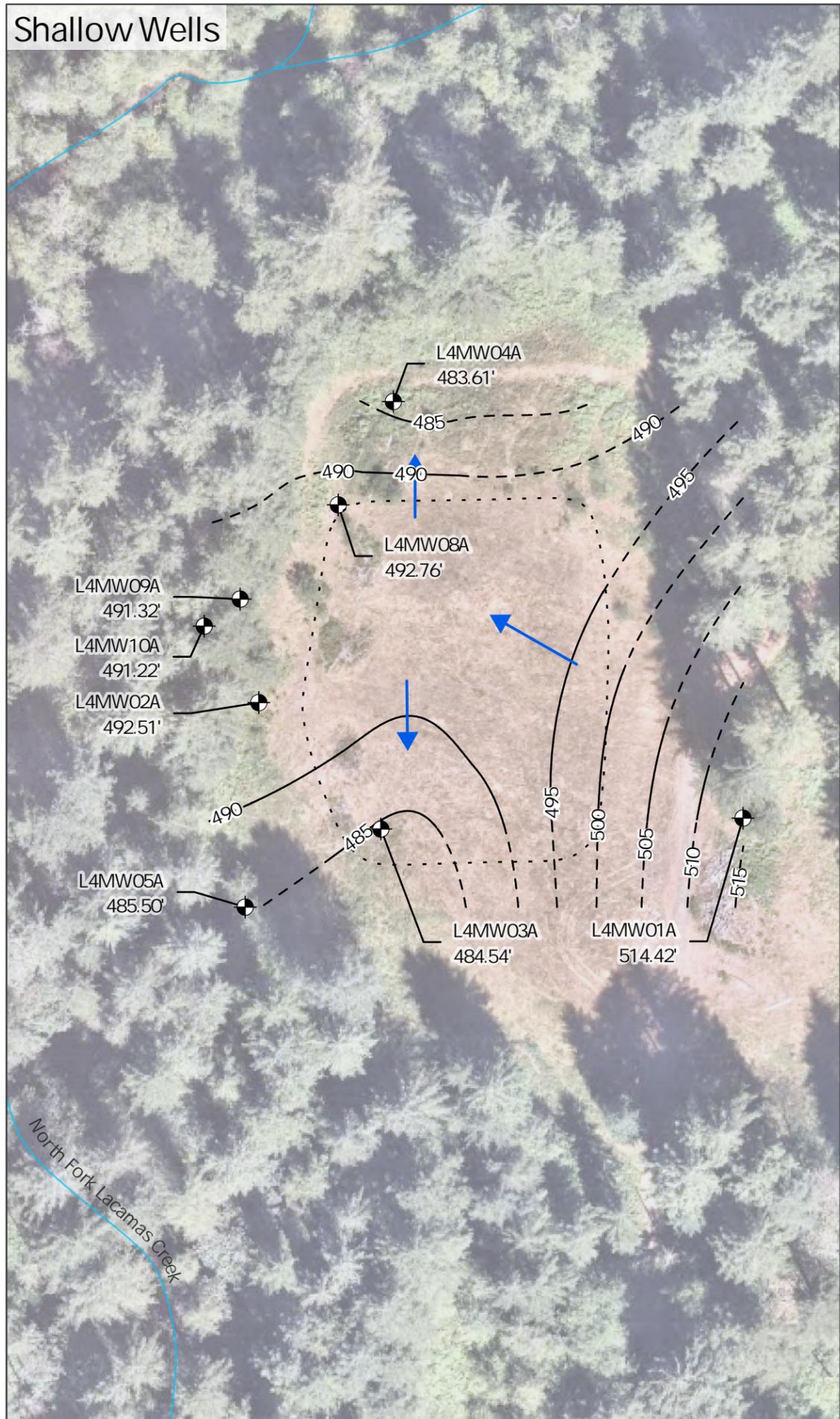
Figure: 5

-  Groundwater Flow Direction
-  Monitoring Well (Groundwater Elevation, Feet ASML)
-  Groundwater Elevation Contour
-  Inferred Groundwater Elevation Contour
-  Base Boundary

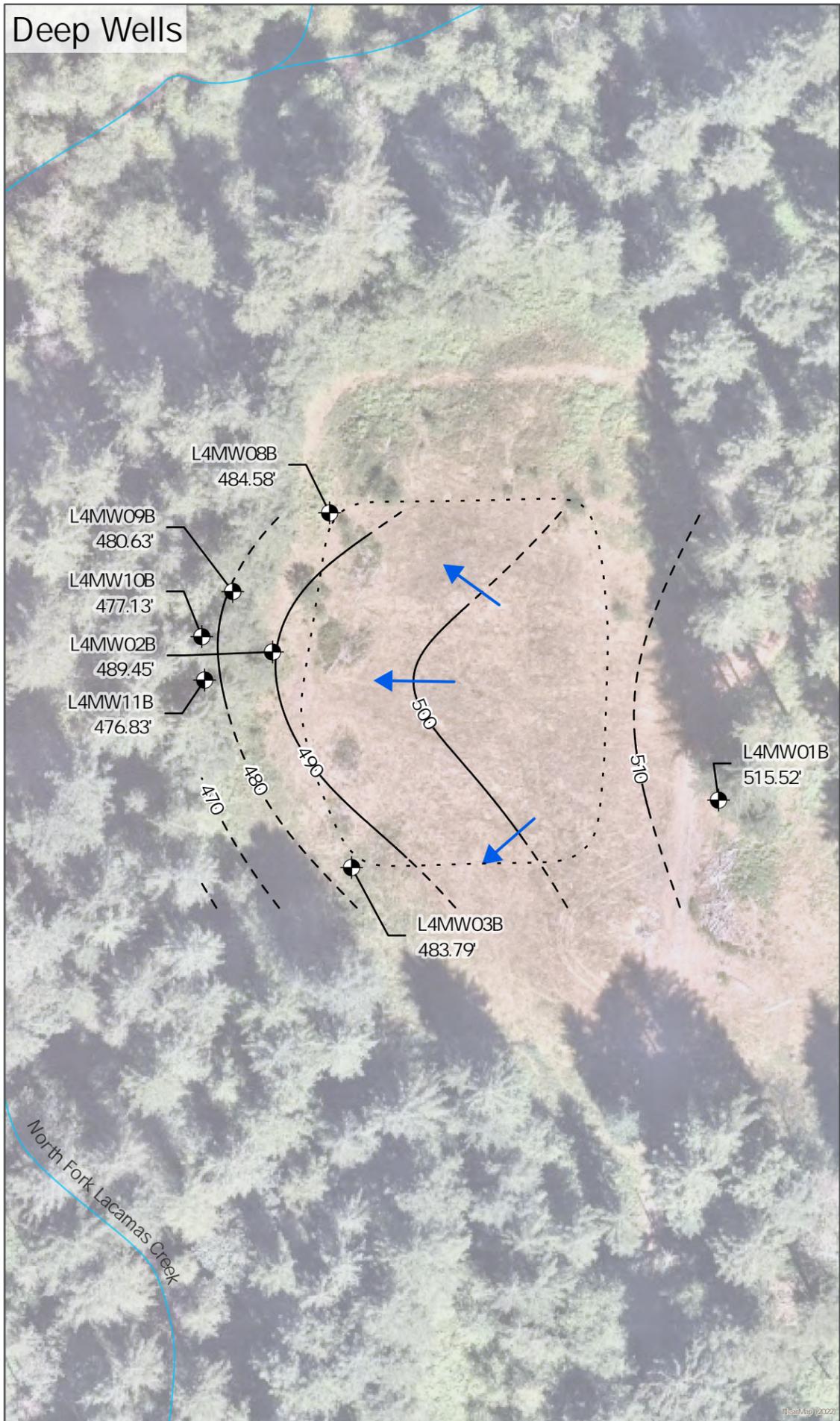


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## Shallow Wells



## Deep Wells



# Landfill 4 Monitoring Well Groundwater Elevation

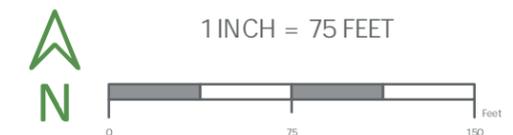
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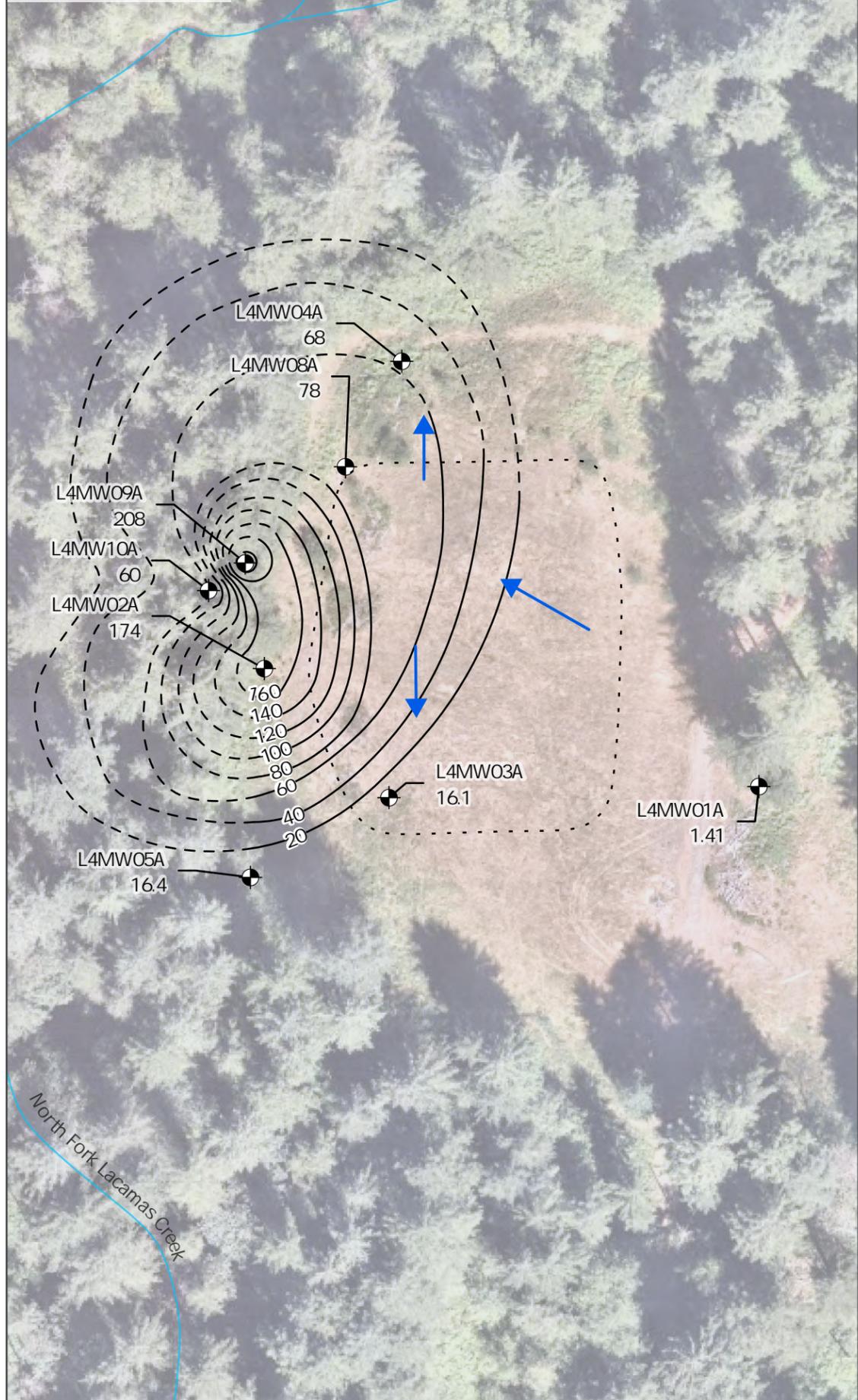
Figure: 6

- Groundwater Flow Direction
- Monitoring Well (Groundwater Elevation, Feet AMSL)
- Groundwater Elevation Contour
- Inferred Groundwater Elevation Contour
- Waterway
- Approximate Landfill 4 Extent

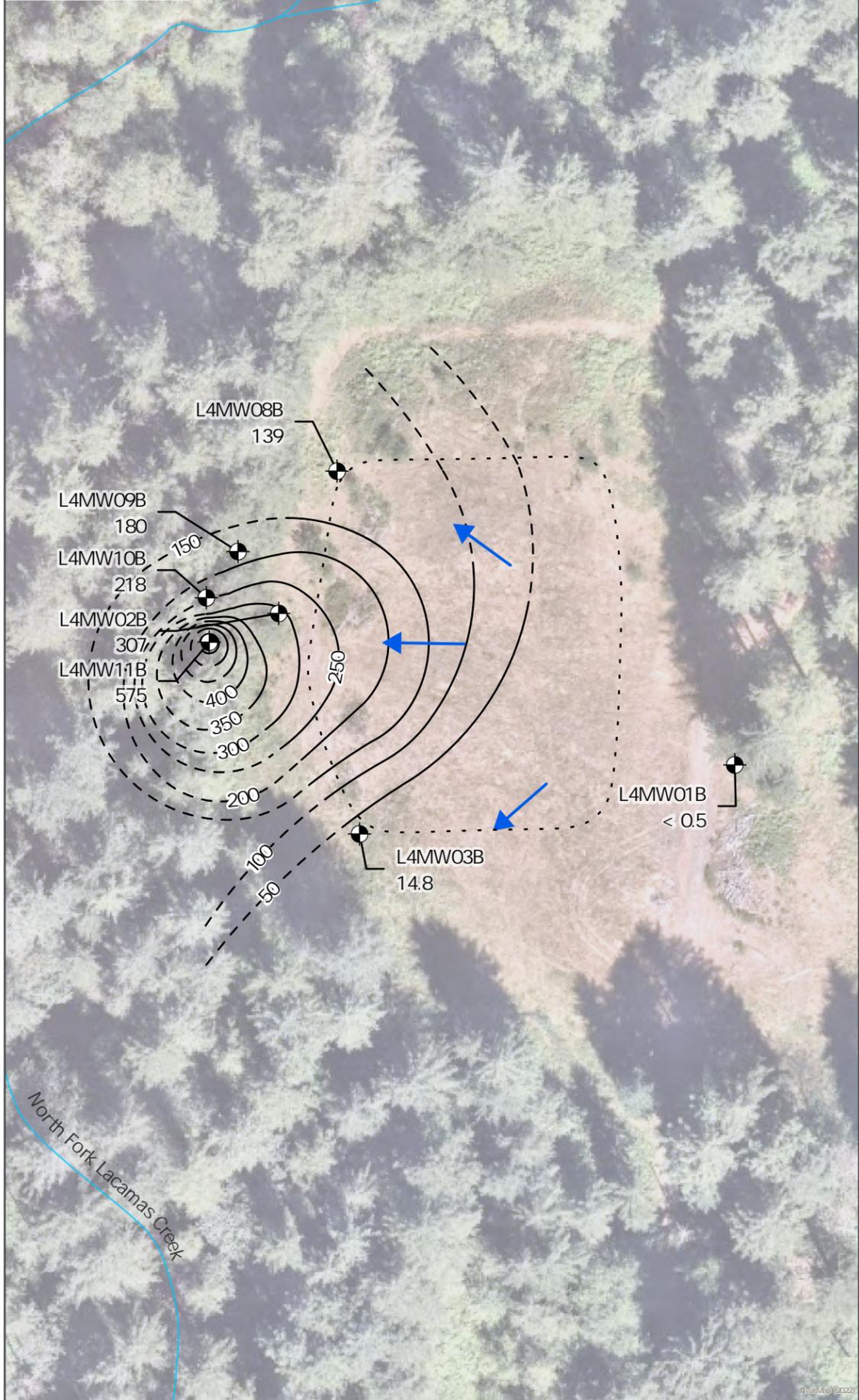


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## Shallow Wells



## Deep Wells



# Landfill 4 Monitoring Well Perchlorate Concentration

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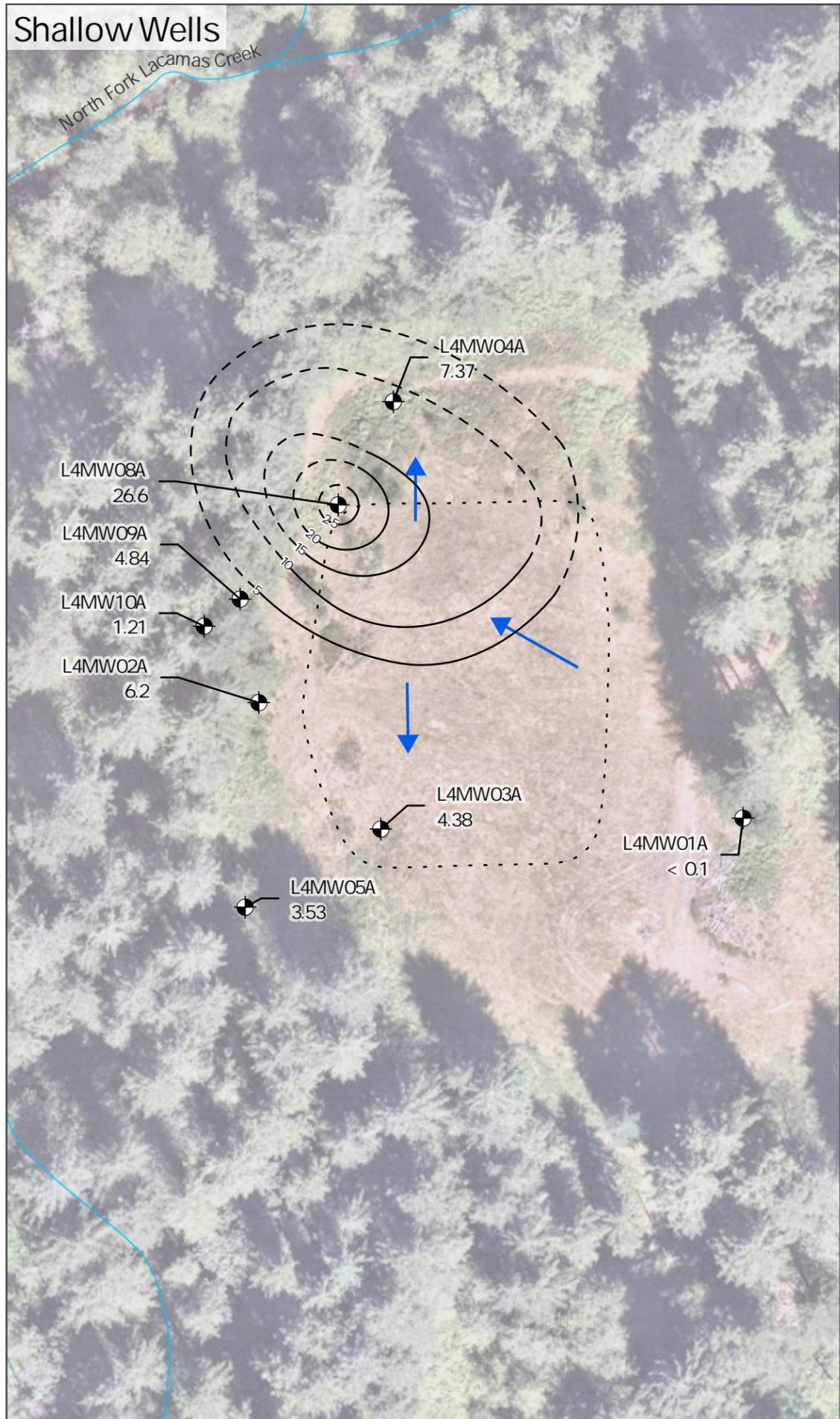
Figure: 7

-  Groundwater Flow Direction
-  Monitoring Well (Perchlorate Concentration,  $\mu\text{g/L}$ )
-  Concentration Contour
-  Inferred Concentration Contour
-  Waterway
-  Approximate Landfill 4 Extent

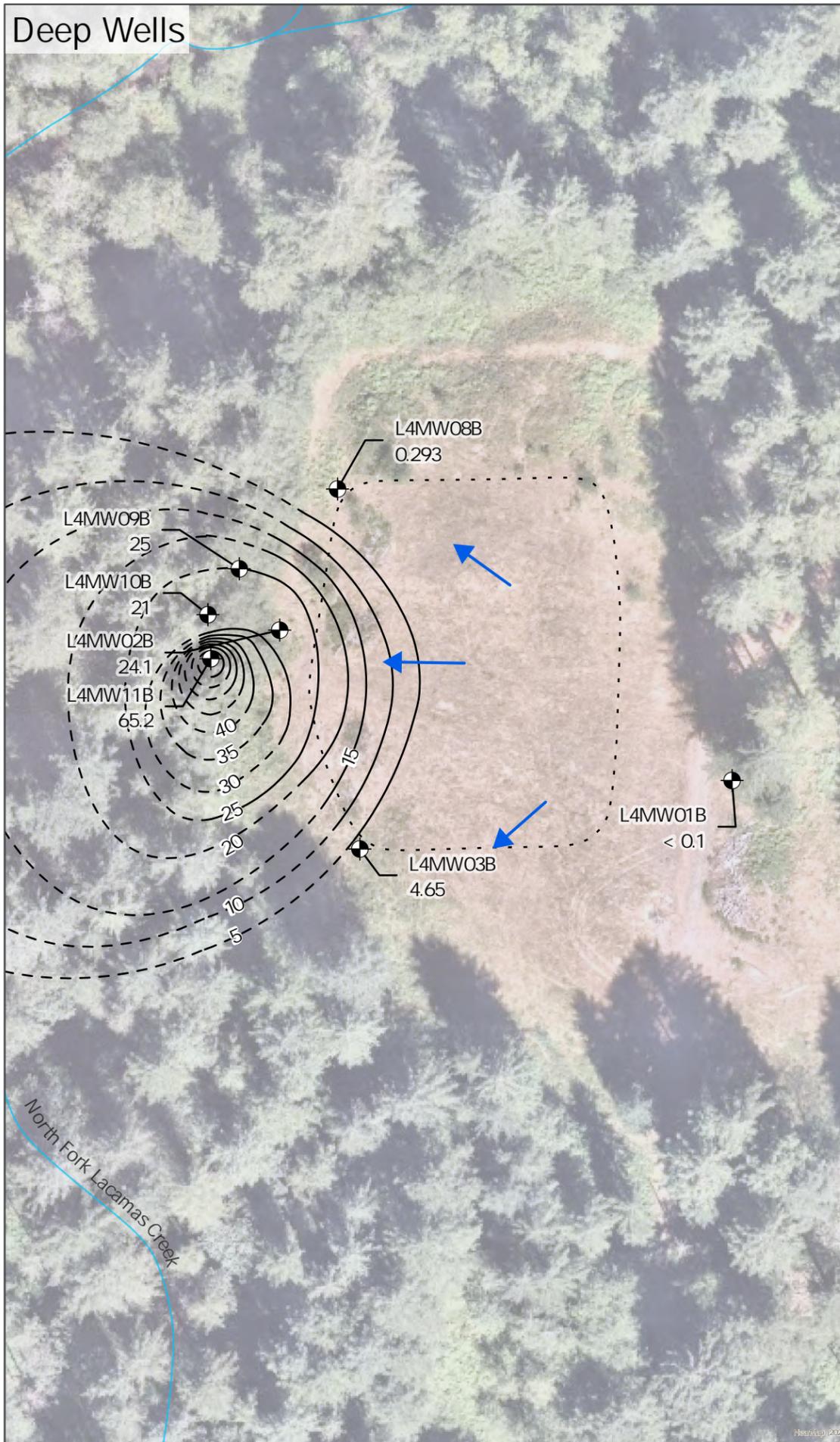


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## Shallow Wells



## Deep Wells



# Landfill 4 Monitoring Well RDX Concentration

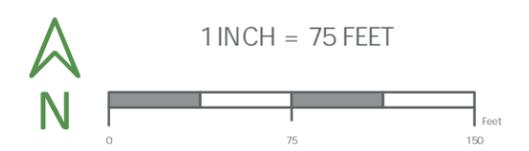
4th Quarter 2023

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Vancouver, Washington

Date: August 2024 | Project: 76151.012

Figure: 8

- Groundwater Flow Direction
- Monitoring Well (RDX Concentration, µg/L)
- Concentration Contour
- Inferred Concentration Contour
- Waterway
- Approximate Landfill 4 Extent

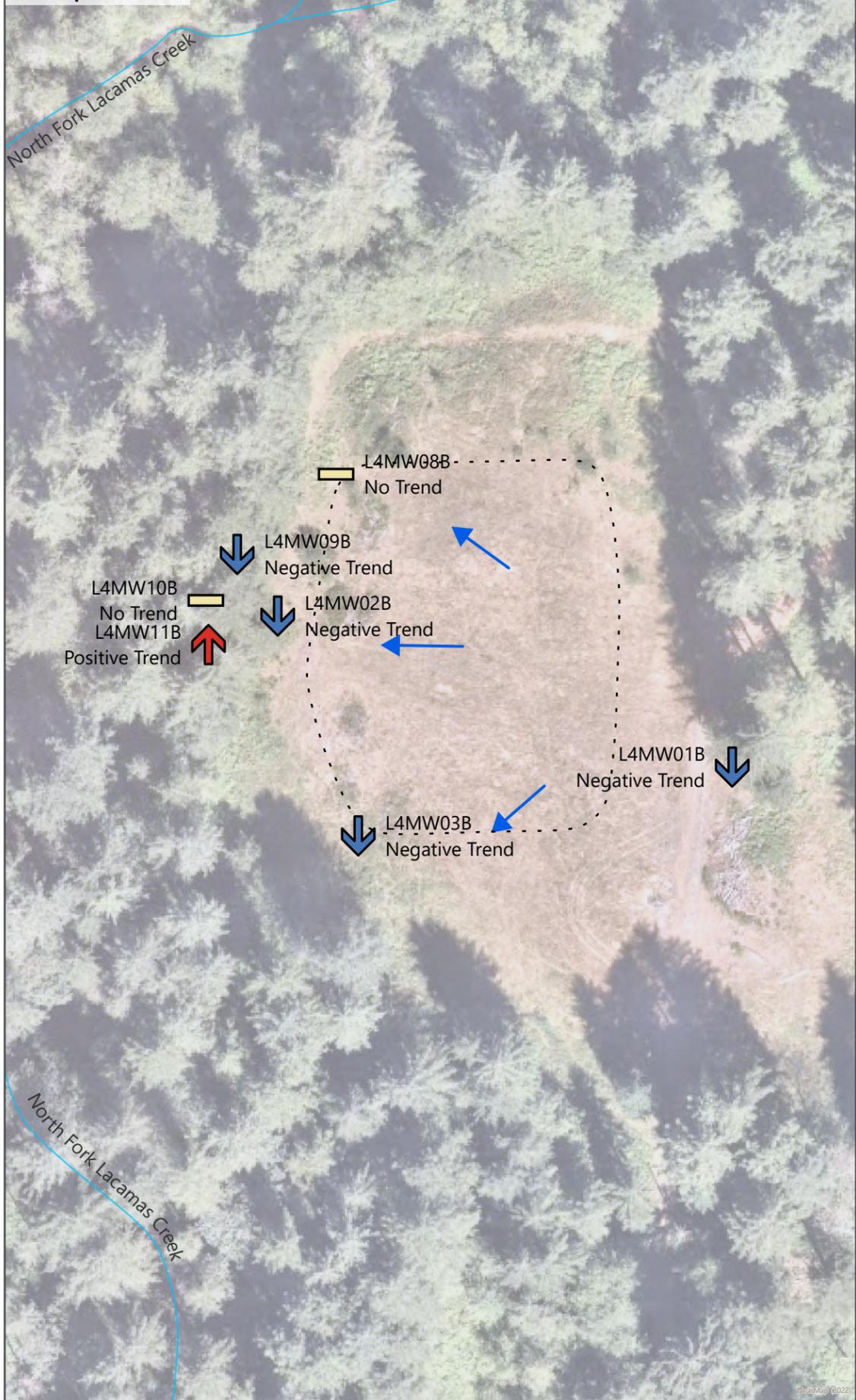


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## Shallow Wells



## Deep Wells



# Landfill 4 Monitoring Well Perchlorate Concentration Trend

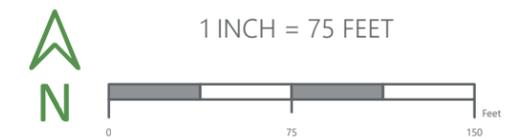
4th Quarter 2023

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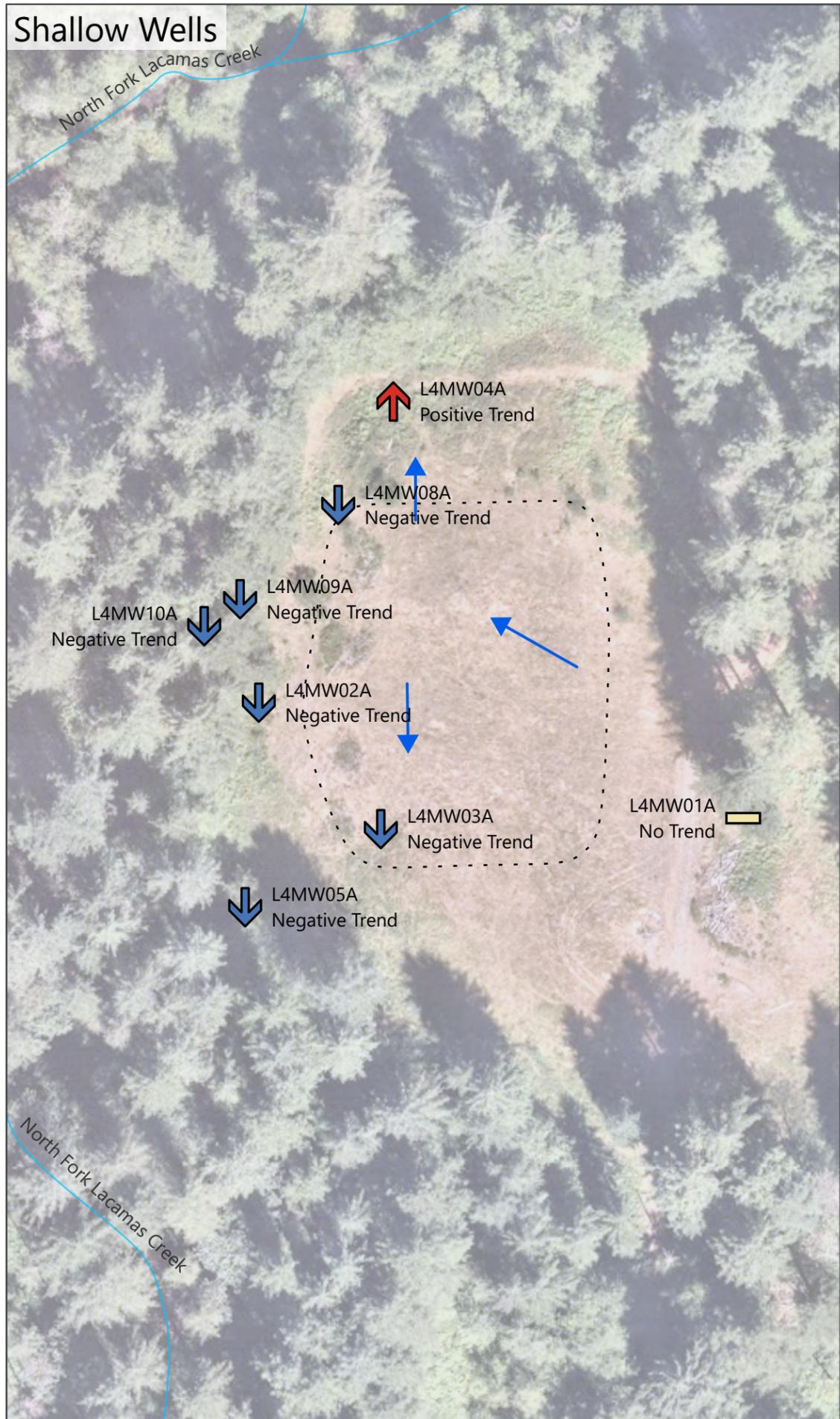
Figure: 9

-  Positive Trend
-  No Trend
-  Negative Trend
-  Groundwater Flow Direction
-  Waterway
-  Approximate Landfill 4 Extent

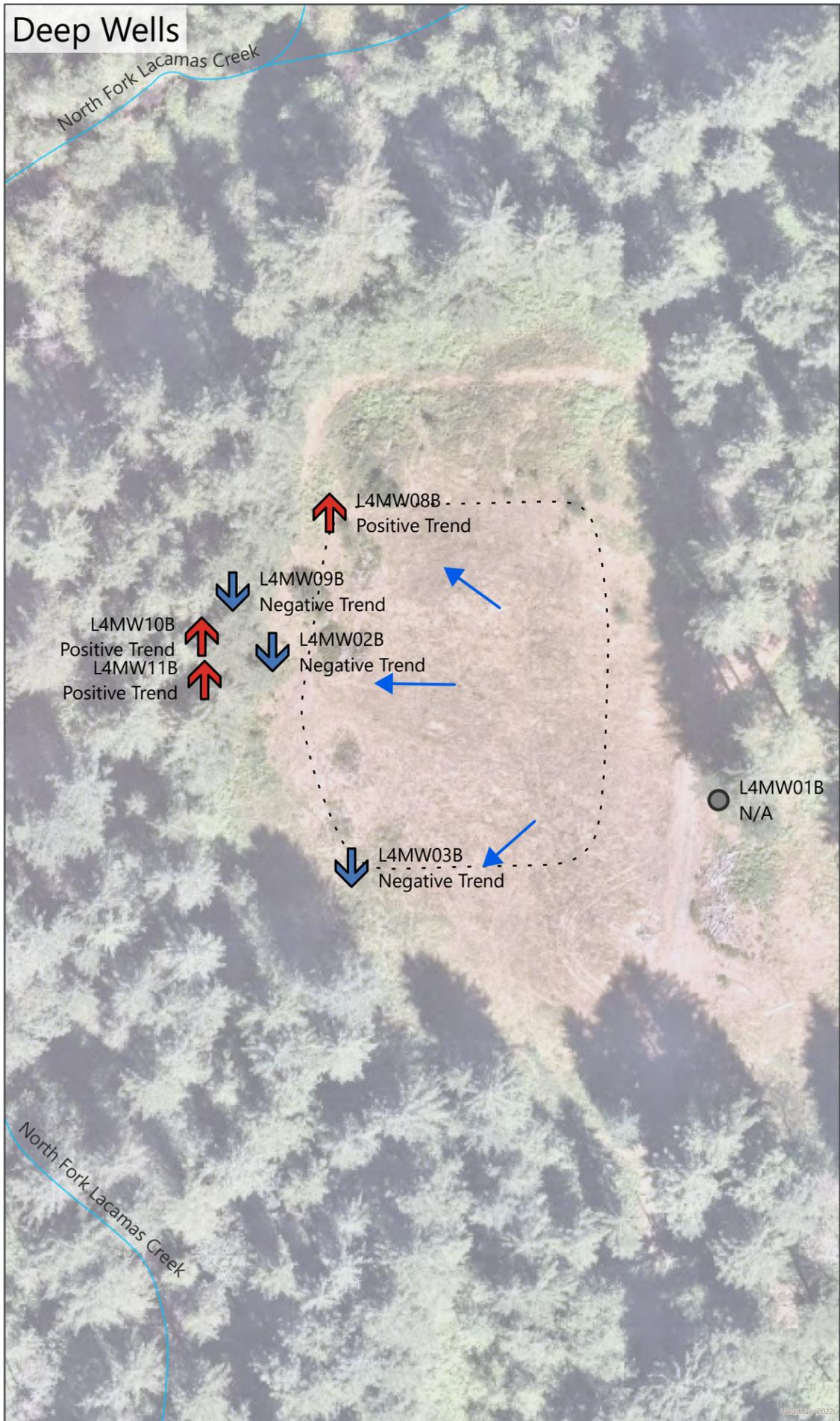


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## Shallow Wells



## Deep Wells



# Landfill 4 Monitoring Well RDX Concentration Trend

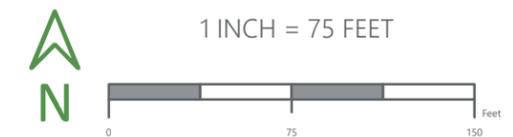
4th Quarter 2023

23201 NE Pluss Road  
Vancouver, Washington

Date: February 2025 | Project: 76151.012

Figure: 10

- Positive Trend
- No Trend
- Negative Trend
- Not Applicable
- Groundwater Flow Direction
- Waterway
- Approximate Landfill 4 Extent



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# Tables

Table 1. Well Number and Construction Details

Table 2. Field Parameters for Groundwater Samples at Base Boundary and Landfill 4/Demolition Area 1,  
4th Quarter 2023

Table 3. Constituents Detected in Groundwater, 4th Quarter 2023

Table 4. Constituents Detected in Water Supply Wells, 4th Quarter 2023

**Table 1. Well Number and Construction Details**

Camp Bonneville, Vancouver, Washington

	Well No. in PBS Work Contract	Date of Construction	Ecology Well Tag No.	Well Location	Measured Total Depth (feet)*	Well Log Total Depth (feet)**	Screened Interval (feet)***	Top of PVC Casing Elevation (feet amsl)	Well No. on Steel Casings/Caps (CHPPM No.)
Base Boundary	LC-MW01S	Nov. 2002	AHA-359	Lacamas Creek	22.71	23.00	10–20	290.15	LC-MW01S
	LC-MW01D	Nov. 2002	AHA-358	Lacamas Creek	42.21	42.50	29.5–39.5	290.26	LC-MW01D
	LC-MW02S	Nov. 2002	AHA-364	Lacamas Creek	17.46	17.70	10–15	291.15	LC-MW02S
	LC-MW02D	Nov. 2002	AHA-357	Lacamas Creek	37.83	38.10	25–35	291.57	LC-MW02D
	LC-MW03S	Nov. 2002	AHA-363	Lacamas Creek	20.09	20.35	13–18	290.87	LC-MW03S
	LC-MW03D	Nov. 2002	AHA-362	Lacamas Creek	39.36	39.48	27–37	290.93	LC-MW03D
	LC-MW04S	Nov. 2002	AHA-375	Lacamas Creek	16.49	16.80	9–14	291.63	LC-MW04S
	LC-MW04D	Nov. 2002	AHA-361	Lacamas Creek	37.03	37.13	24.5–34.5	291.79	LC-MW04D
	LC-MW09S	Aug. 2017	BJH-382	Lacamas Creek	22.05	22.38	15–20	293.52	LC-MW09S
	LC-MW09D	Aug. 2017	BJH-380	Lacamas Creek	41.60	42.27	30–40	294.10	LC-MW09D
Landfill 4 / Demolition Area 1	L4-MW01A	Dec. 1998	NA	Landfill 4	30.17	30.40	17–27	531.43	L4-MW01A
	L4-MW01B	Jun. 2001	AGL-482	Landfill 4	55.54	56.00	43–53	529.57	L4-MW01B
	L4-MW02A	Dec. 1998	NA	Landfill 4	40.21	40.20	27–37	519.97	L4-MW02A
	L4-MW02B	Jun. 2001	AGL-483	Landfill 4	74.97	75.00	62–72	521.70	L4-MW02B
	L4-MW03A	Jun. 2001	AGL-466	Landfill 4	48.71	49.00	41–46	514.90	L4-MW03A
	L4-MW03B	Jun. 2001	AGL-484	Landfill 4	61.85	63.00	50–60	511.49	L4-MW03B
	L4-MW04A	Jun. 2001	AGL-465	Landfill 4	46.44	46.00	33–43	511.84	L4-MW04A
	L4-MW05A	Jun. 2001	AGL-467	Landfill 4	36.63	36.00	28–33	509.74	L4-MW05A
	L4-MW07B	Dec. 2002	NA	Landfill 4	58.86	58.90	46–56	480.49	L4-MW07B
	L4-MW08A	Aug. 2017	BJH-379	Landfill 4	40.72	40.31	28–38	515.52	L4-MW08A
	L4-MW08B	Aug. 2017	BJH-378	Landfill 4	67.41	67.31	55–65	515.72	L4-MW08B
	L4-MW09A	Aug. 2017	BJH-377	Landfill 4	42.45	42.43	30–40	523.00	L4-MW09A
	L4-MW09B	Aug. 2017	BJH-376	Landfill 4	77.65	77.36	65–75	523.27	L4-MW09B
	L4-MW10A	Aug. 2017	BJH-375	Landfill 4	42.71	42.43	30–40	523.05	L4-MW10A
	L4-MW10B	Jul. 2017	BJH-374	Landfill 4	77.30	77.17	65–75	522.48	L4-MW10B
	L4-MW11B	Jul. 2017	BJH-373	Landfill 4	77.57	77.27	65–75	522.29	L4-MW11B
	L4-MW17	May 2004	ALB-252	Landfill 4	17.17	17.67	5–15	361.48	L4-MW17
	L4-MW18	May 2004	ALB-251	Landfill 4	22.60	22.01	10–20	362.84	L4-MW18

Notes:

\* = depth in feet measured from top of well polyvinyl chloride (PVC) casing in December 2007 and August 2017; sediment present at bottom of some casings

\*\* = casing depth in feet recorded on well log; measured from top of PVC casing

\*\*\* = screened interval reported on well completion logs; feet below ground surface

amsl = above mean sea level

NA = not available

**Table 2. Field Parameters for Groundwater Samples at Base Boundary and Landfill 4/Demolition Area 1, 4th Quarter 2023**

Camp Bonneville, Vancouver, Washington

	Sample ID	Date Sampled	Depth to Water	Water Elevation	Dissolved Oxygen	Oxidation Reduction Potential	pH	Specific Conductivity	Temperature	Turbidity
			feet below TOC	feet amsl*	mg/L	millivolts	pH units	µS/cm	degrees Celsius	NTU
Base Boundary	04Q23LCMW01DW	11/27/2023	5.43	284.83	7.52	69.2	6.65	92	10.8	0.02
	04Q23LCMW01SW	11/27/2023	5.05	285.10	7.11	61.0	6.68	90	11.6	0.18
	04Q23LCMW02DW	11/28/2023	5.98	285.59	7.83	63.3	6.04	91	10.6	0.09
	04Q23LCMW02SW	11/28/2023	5.33	285.82	8.03	60.9	6.41	87	11.3	1.17
	04Q23LCMW03DW	11/28/2023	4.96	285.97	7.97	46.6	6.64	96	10.8	4.15
	04Q23LCMW03SW	11/28/2023	5.77	285.10	7.64	72.4	6.38	104	11.0	2.90
	04Q23LCMW04DW	11/29/2023	5.54	286.25	7.98	78.9	6.08	96	10.0	1.99
	04Q23LCMW04SW	11/29/2023	4.84	286.79	6.77	73.0	5.27	90	11.1	0.59
	04Q23LCMW09DW	11/27/2023	7.51	286.59	6.51	94.9	6.01	97	10.6	0.71
	04Q23LCMW09SW	11/27/2023	6.78	286.74	7.18	82.8	6.14	87	11.1	0.43
Landfill 4 / Demolition Area 1	04Q23L4MW01AW	11/29/2023	17.01	514.42	6.19	105.5	4.47	25	10.1	1.78
	04Q23L4MW01BW	11/29/2023	14.05	515.52	9.02	113.1	4.63	26	10.2	1.14
	04Q23L4MW02AW	11/30/2023	27.46	492.51	8.13	135.1	4.59	19	10.7	0.71
	04Q23L4MW02BW	11/30/2023	32.24	489.46	3.42	126.3	5.03	43	9.5	0.02
	04Q23L4MW03AW	11/30/2023	30.35	484.55	7.23	98.6	5.18	21	10.2	0.31
	04Q23L4MW03BW	11/30/2023	27.70	483.79	6.51	96.4	5.39	44	9.3	0.20
	04Q23L4MW04AW	11/29/2023	28.23	483.61	5.65	121.2	4.35	16	9.6	4.77
	04Q23L4MW05AW	11/29/2023	24.33	485.41	6.13	119.3	4.54	27	9.5	2.41
	04Q23L4MW07BW	11/29/2023	40.17	440.32	6.29	87.2	4.93	31	9.4	0.10
	04Q23L4MW08AW	12/1/2023	22.75	492.77	7.02	67.6	4.89	17	10.0	0.02
	04Q23L4MW08BW	12/1/2023	31.13	484.59	3.57	47.8	5.98	60	10.0	0.35
	04Q23L4MW09AW	12/1/2023	31.67	491.33	7.41	119.6	4.11	22	9.9	1.46
	04Q23L4MW09BW	12/1/2023	42.63	480.64	2.42	81.4	4.72	32	9.8	0.02
	04Q23L4MW10AW	11/30/2023	31.83	491.22	6.01	135.7	4.68	19	10.0	3.95
	04Q23L4MW10BW	11/30/2023	45.34	477.14	3.22	109.6	5.59	42	9.6	1.12
	04Q23L4MW11BW	11/30/2023	45.45	476.84	4.13	139.0	4.85	26	8.1	0.02
04Q23L4MW17W	11/29/2023	11.09	350.43	6.96	55.0	6.80	229	10.8	12.3	
04Q23L4MW18W	11/29/2023	12.00	350.85	7.65	68.3	5.74	129	11.4	3.52	
Water Wells	04Q22BONNEVILLEW	11/28/2023	--	NA	2.94	31.5	7.54	132	12.0	11.6
	04Q23RANGEROADW	11/28/2023	--	NA	6.72	95.0	5.99	99	9.4	6.87
	04Q22KILLPACKW	11/28/2023	--	NA	55.44	12.8	7.90	130	13.3	3.92

Field parameters were measured using a YSI Pro and a flow-through cell, with the exception of turbidity, which was measured using an HF Scientific TPW Meter

\* water level in feet above mean sea level, relative to top of polyvinyl chloride (PVC) casing elevation survey

Water level measurements are not collected from the Water Wells

amsl = above mean sea level

mg/L = milligrams per liter

µS/cm = micro-siemens per centimeter

NTU = Nephelometric Turbidity Units

TOC = top of casing

**Table 3. Constituents Detected in Groundwater, Base Boundary, 4th Quarter 2023**

Camp Bonneville, Vancouver, Washington

Analyte	MTCA Method B Std. Cleanup Values	LCMW01D	LCMW01S	LCMW02D	LCMW02S	LCMW02S Duplicate		LCMW03D	LCMW03S	LCMW04D	LCMW04S	LCMW09D	LCMW09S
		11/27/2023	11/27/2023	11/28/2023	11/28/2023	11/28/2023	RPD (<20%)	11/28/2023	11/28/2023	11/29/2023	11/29/2023	11/27/2023	11/27/2023
<b>Explosives (µg/L)</b>													
2,4,6- Trinitrotoluene	2.9	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	Acceptable	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100
2,4-Dinitrotoluene	0.28	< 0.500	< 0.100	< 0.500	< 0.500	< 0.500	Acceptable	< 0.500	< 0.100	< 0.500	< 0.500	< 0.500	< 0.500
HMX	800	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	Acceptable	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100
RDX	1.10	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	Acceptable	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100
Remaining Explosives	Varies	ND	ND	ND	ND	ND	Acceptable	ND	ND	ND	ND	ND	ND
<b>Perchlorate (µg/L)</b>													
Perchlorate	11.0	< 0.500	< 0.500	< 0.500	< 0.500	< 0.500	Acceptable	< 0.500	< 0.500	< 0.500	< 0.500	< 0.500	< 0.500
<b>Volatile Organic Compounds (µg/L)</b>													
1,1,1-Trichloroethane	16,000	< 0.500	< 0.500	< 0.500	< 0.500	< 0.500	Acceptable	< 0.500	< 0.500	< 0.500	< 0.500	< 0.500	< 0.500
1,1,2,2-Tetrachloroethane	0.220	< 0.500	< 0.500	< 0.500	< 0.500	< 0.500	Acceptable	< 0.500	< 0.500	< 0.500	< 0.500	< 0.500	< 0.500
1,1-Dichloroethane	7.7	< 0.500	< 0.500	< 0.500	< 0.500	< 0.500	Acceptable	< 0.500	< 0.500	< 0.500	< 0.500	< 0.500	< 0.500
1,1-Dichloroethene	400	< 0.500	< 0.500	< 0.500	< 0.500	< 0.500	Acceptable	< 0.500	< 0.500	< 0.500	< 0.500	< 0.500	< 0.500
Acetone	7,200	< 2.50	< 2.50	< 2.50	< 2.50	< 2.50	Acceptable	< 2.50	< 2.50	< 2.50	< 2.50	< 2.50	< 2.50
Dichlorodifluoromethane	1,600	< 0.500	< 0.500	< 0.500	< 0.500	< 0.500	Acceptable	< 0.500	< 0.500	< 0.500	< 0.500	< 0.500	< 0.500
Remaining VOCs	Varies	ND	ND	ND	ND	ND	Acceptable	ND	ND	ND	ND	ND	ND
<b>Semi Volatile Organic Compounds (µg/L)</b>													
All SVOCs	Varies	ND	ND	ND	ND	ND	ND	Acceptable	ND	ND	ND	ND	ND
<b>Metals (µg/L)</b>													
All Metals	Varies	ND	ND	ND	ND	ND	ND	Acceptable	ND	ND	ND	ND	ND

Notes:

< = not detected above the indicated method reporting limit

**BOLD** = exceeds cleanup values

µg/L = micrograms per liter

ND = not detected

RPD = relative percent different

Acceptable = no detection in original or duplicate, or the difference in detection values is less than the reporting limit

**Table 4. Constituents Detected in Groundwater, Landfill 4/Demolition Area 1, 4th Quarter 2023**

Camp Bonneville, Vancouver, Washington

Analyte	MTCA Method B Std. Cleanup Values	L4MW01A	L4MW01B	L4MW02A	L4MW02A Duplicate		L4MW02B	L4MW02B Duplicate		L4MW03A	L4MW03B	L4MW04A	L4MW05A
		11/29/2023	11/29/2023	11/30/2023	11/30/2023	RPD (<20%)	11/30/2023	11/30/2023	RPD (<20%)	11/30/2023	11/30/2023	11/29/2023	11/29/2023
<b>Explosives (µg/L)</b>													
2,4,6- Trinitrotoluene	2.9	< 0.100	< 0.100	< 0.100	< 0.100	Acceptable	0.152	0.145	5%	< 0.100	< 0.100	< 0.100	< 0.100
2,4-Dinitrotoluene	0.28	< 0.100	< 0.100	< 0.100	< 0.100	Acceptable	<b>0.336</b>	<b>0.321</b>	5%	< 0.100	< 0.100	< 0.100	< 0.100
HMX	800	< 0.100	< 0.100	2.49	2.43	2%	5.32	5.08	5%	0.202	< 0.100	< 0.100	< 0.100
RDX	1.10	< 0.100	< 0.100	<b>6.20</b>	<b>6.10</b>	2%	<b>24.1</b>	<b>23.4</b>	3%	<b>4.38</b>	<b>4.65</b>	<b>7.37</b>	<b>3.53</b>
Remaining Explosives	Varies	ND	ND	ND	ND	Acceptable	ND	ND	Acceptable	ND	ND	ND	ND
<b>Perchlorate (µg/L)</b>													
Perchlorate	11.0	1.41	< 0.500	<b>174</b>	<b>173</b>	1%	<b>307</b>	<b>309</b>	1%	<b>16.1</b>	<b>14.8</b>	<b>68</b>	<b>16.4</b>
<b>Volatile Organic Compounds (µg/L)</b>													
1,1,1-Trichloroethane	16,000	< 0.500	< 0.500	< 0.500	< 0.500	Acceptable	< 0.500	< 0.500	Acceptable	< 0.500	< 0.500	< 0.500	< 0.500
1,1,2,2-Tetrachloroethane	0.220	< 0.500	< 0.500	< 0.500	< 0.500	Acceptable	< 0.500	< 0.500	Acceptable	< 0.500	< 0.500	< 0.500	< 0.500
1,1-Dichloroethane	7.7	< 0.500	< 0.500	< 0.500	< 0.500	Acceptable	0.57	0.58	2%	< 0.500	< 0.500	< 0.500	< 0.500
1,1-Dichloroethene	400	< 0.500	< 0.500	< 0.500	< 0.500	Acceptable	< 0.500	< 0.500	Acceptable	< 0.500	< 0.500	< 0.500	< 0.500
Acetone	7,200	< 2.50	< 2.50	< 2.50	< 2.50	Acceptable	< 2.50	< 2.50	Acceptable	< 2.50	< 2.50	< 2.50	< 2.50
Dichlorodifluoromethane	1,600	< 0.500	< 0.500	< 0.500	< 0.500	Acceptable	1.31	1.3	1%	< 0.500	< 0.500	< 0.500	< 0.500
Remaining VOCs	Varies	ND	ND	ND	ND	Acceptable	ND	ND	Acceptable	ND	ND	ND	ND

Notes:

< = not detected above the indicated method reporting limit

**BOLD** = exceeds cleanup values

µg/L = micrograms per liter

ND = not detected

RPD = relative percent different

Acceptable = no detection in original or duplicate, or the difference in detection values is less than the reporting limit

**Table 4. Constituents Detected in Groundwater, Landfill 4/Demolition Area 1, 4th Quarter 2023**

Camp Bonneville, Vancouver, Washington

Analyte	MTCA Method B Std. Cleanup Values	L4MW07B	L4MW08A	L4MW08B	L4MW09A	L4MW09B	L4MW10A	L4MW10B	L4MW11B	L4MW17	L4MW18
		11/29/2023	12/1/2023	12/1/2023	12/1/2023	12/1/2023	11/30/2023	11/30/2023	11/30/2023	11/29/2023	11/29/2023
<b>Explosives (µg/L)</b>											
2,4,6- Trinitrotoluene	2.9	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100
2,4-Dinitrotoluene	0.28	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100
HMX	800	< 0.100	1.24	< 0.101	1.05	1.68	<0.100	<0.100	< 0.100	< 0.100	< 0.100
RDX	1.10	< 0.100	<b>26.6</b>	0.293	<b>4.84</b>	<b>25</b>	<b>1.21</b>	<b>21</b>	<b>65.2</b>	< 0.100	< 0.100
Remaining Explosives	Varies	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
<b>Perchlorate (µg/L)</b>											
Perchlorate	11.0	1.24	<b>78</b>	<b>139</b>	<b>208</b>	<b>180</b>	<b>60</b>	<b>218</b>	<b>575</b>	< 0.500	< 0.500
<b>Volatile Organic Compounds (µg/L)</b>											
1,1,1-Trichloroethane	16,000	< 0.500	< 0.500	< 0.500	< 0.500	1.54	<0.500	2.81	1.60	< 0.500	< 0.500
1,1,2,2-Tetrachloroethane	0.220	< 0.500	< 0.500	< 0.500	< 0.500	<b>0.60</b>	< 0.500	< 0.500	< 0.500	< 0.500	< 0.500
1,1-Dichloroethane	7.7	< 0.500	< 0.500	< 0.500	< 0.500	3.77	< 0.500	5.72	4.03	< 0.500	< 0.500
1,1-Dichloroethene	400	< 0.500	< 0.500	< 0.500	< 0.500	2.16	< 0.500	4.76	2.08	< 0.500	< 0.500
Acetone	7,200	< 2.50	2.54	<2.50	< 2.50	< 2.50	< 2.50	< 2.50	< 2.50	< 2.50	< 2.50
Dichlorodifluoromethane	1,600	< 0.500	< 0.500	1.49	< 0.500	10.70	< 0.500	27.2	10.2	< 0.500	< 0.500
Remaining VOCs	Varies	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

< = not detected above the indicated method reporting limit

**BOLD** = exceeds cleanup values

µg/L = micrograms per liter

ND = not detected

RPD = relative percent different

Acceptable = no detection in original or duplicate, or the difference in detection values is less than the reporting limit

**Table 5. Constituents Detected in Water Supply Wells, 4th Quarter 2023**

Camp Bonneville, Vancouver, Washington

Analyte	MTCA Method B Std. Cleanup Values	Range Road	Range Road Duplicate		Killpack	Bonneville
		11/28/2023	11/28/2023	RPD (<20%)	11/28/2023	11/28/2023
<b>Explosives (µg/L)</b>						
All Explosives	Varies	ND	ND	Acceptable	ND	ND
<b>Perchlorate (µg/L)</b>						
Perchlorate	11.0	< 0.500	< 0.500	Acceptable	< 0.500	< 0.500
<b>Volatile Organic Compounds (µg/L)</b>						
All VOCs	Varies	ND	ND	Acceptable	ND	ND

Notes:

< = not detected above the indicated method reporting limit

Acceptable = No detection in original or duplicate, or the difference in detection values is less than the reporting limit

µg/L = micrograms per liter

ND = not detected

RPD = relative percent difference

# **Appendix A**

## **List of Acronyms and Abbreviations**

## List of Acronyms and Abbreviations

amsl	above mean sea level
AP	ammonium perchlorate
bgs	below ground surface
CD	compact disc
BRAC	Base Realignment and Closure
CHPPM	US Army Center for Health Promotion and Preventative Medicine
COC	contaminants of concern
COPC	chemical of potential concern
DNR	State of Washington Department of Natural Resources
DO	dissolved oxygen
DQO	data quality objectives
Ecology	Washington State Department of Ecology
EDD	electronic data deliverable
EPA	US Environmental Protection Agency
FBI	Federal Bureau of Investigation
GC/MS	gas chromatography/mass spectrometer
HASP	health and safety plan
HE	high explosives 2,4 DNT, 2,6 DNT
HMX	octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine
IC	ion chromatography
ICSA/AB	interference check solution A/interference check solution
IDL	instrument detection limit
IDW	investigation-derived waste
LCS	laboratory control sample
LCSD	laboratory control sample duplicate
µg/L	micrograms per liter (approximately equal ppb)
µm	micrometer
MDL	method detection limit
mg/L	milligrams per liter (approximately equal ppm)
mL	milliliters
MRL	method reporting limit
MS	matrix spike
MSD	matrix spike duplicate
MTCA	Model Toxics Control Act (Chapter 173-340 WAC)
NG	nitroglycerine
OE	ordinance and explosives
ORP	oxidation reduction potential
PA	picric acid
PAH	polycyclic aromatic hydrocarbons
PBS	PBS Engineering and Environmental Inc.

PCBs	polychlorinated biphenyls
PES	polyethersulfone
PETN	pentaerythritol tetranitrate
ppb	parts per billion
ppm	parts per million
PQL	practical quantitation limit
PVC	polyvinyl chloride
QA	quality assurance
QAPP	quality assurance project plan
QC	quality control
RAU	remedial action unit
RDX	hexahydro-1,3,5-trinitro-1,3,5-triazine (Cyclonite)
RI	remedial investigation
RPD	relative percent difference
SAP	sampling and analysis plan
SDG	sample delivery groups
SDS	sample data sheets
SI	site investigation
SOP	standard operating procedure
SOW	statement of work
SVOC	semi-volatile organic compound
TBD	to be determined
TIC	tentatively identified compound
TNT	2,4,6-trinitrotoluene
TOC	total organic carbon
TPH	total petroleum hydrocarbons
USACE	United States Army Corps of Engineers
UXO	unexploded ordnance
VOC	volatile organic compound

# **Appendix B**

## **Groundwater Disposal Receipt and Field Forms**

**DAILY FIELD ACTIVITY REPORT**

**Project:** Camp Bonneville Groundwater Sampling and Analysis

**Date:** 11-27-23

**PBS Project No.** 76151.012

**Phase/Task:** 0002

WEATHER	(Bright Sun)	Clear	Overcast	Rain	Snow
TEMP (degrees F.)	To 32	(32-50)	50-70	70-85	85 up
WIND	Still	(Moderate)	High		
HUMIDITY	Dry	(Moderate)	High		

**PBS/Subcontractor Personnel and Duties:**

Name	Hours of Work	Employer	Description of Work
David Rukt.	11	PBS Engineering + Environmental	Groundwater monitoring
Riley Martin	11	PBS Engineering + Environmental	Groundwater monitoring

**Work Performed Today:** See Groundwater Field Sampling Form for details of sampling at each well

Groundwater Level Measurements	Groundwater Sample Collection (list wells).	Other
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	LCMW01D      LCMW09D LCMW01S      LCMW09S	

**Remarks:** (i.e., instructions received or given; problems or deficiencies noted; delays encountered; other)

- Later start due to field prep delay
- Decided ~~to~~ not to ship samples to work later
- Samples on ice, will be shipped tomorrow

**List of Attachments:**

- Depth to Water Sheet:  Yes  No
- Groundwater Field Sampling Form:  Yes  No
- Lab Chain of Custody:  Yes  No
- Other \_\_\_\_\_
- Other \_\_\_\_\_

**Contractor's Verification:** On behalf of PBS Engineering + Environmental, I certify this report is complete and correct, and all work performed during this reporting period are in compliance with the contract Scope of Work and specifications, to the best of my knowledge, except as may be noted above.

David Rukt.  
Name

11/27/23  
Date





PBS Engineering and Environmental Inc.

DEPTH TO GROUNDWATER FORM

Revised: 7/26/23

PROJECT: Camp Bonneville  
Clark County, Washington

PROJECT NO: 76151.012

Date: 11/27/2023

Field Personnel: David Rukki + Riley Martin

Start Time: 1030

Weather Conditions: Clear, 30°

End Time: 1145

INITIAL DEPTH TO WATER MEASUREMENTS

More Info on Back? Yes/No

Monitoring Well ID	Depth to Water Measurement (ft)	Measurement Taken from (e.g., TOC/Metal Casing)	Time	Well Condition Notes
LCMW09D	7.51	TOC	1145	
LCMW09S	6.78		1143	
LCMW01D	5.43		1139	
LCMW01S	5.05		1140	
LCMW02D	5.98		1134	
LCMW02S	5.33		1136	
LCMW03D	4.96		1138	
LCMW03S	5.77		1130	
LCMW04D	5.54		1128	
LCMW04S	4.84		1126	
L4MW17	11.09		1114	
L4MW18	12.00		1111	
L4MW07B	40.17		1105	
L4MW01A	17.01		1102	
L4MW01B	14.05		1100	
L4MW02A	27.46		1037	
L4MW02B	32.24		1039	
L4MW03A	30.35		1030	
L4MW03B	27.70		1032	
L4MW04A	28.23		1056	
L4MW05A	24.33		1035	
L4MW08A	22.75		1052	
L4MW08B	31.13		1050	
L4MW09A	31.67		1048	
L4MW09B	42.63		1046	
L4MW10A	31.83		1044	
L4MW10B	45.34		1043	
L4MW11B	45.45		1041	

Equipment Used: Water Level Indicator

Additional Notes/Observations: Salinity

Signature of Field Personnel: *David Rukki* *Riley Martin*

Date: 11-27-23





PBS Engineering + Environmental

**GROUNDWATER  
SAMPLING FIELD FORM**

Revised: 7/26/2023

04Q 2023

PROJECT: Camp Bonneville

Clark County, Washington

PROJECT NO: 76151.012

Date: 11 / 27 / 2023

Initial DTW (feet bgs)	5.05	Monitoring Well ID:	LCMW01S
Screen Interval (feet bgs)	10 - 20	Sample ID	04Q23LCMW01SW
Well Depth (feet bgs)	23	Sample Time	1310
Depth of pump (ft bgs)	20	QC Sample type:	<input checked="" type="checkbox"/> Not collected
Sampling Method	Dedicated Bladder Pump	ID:	
Purge rate (mL/min)	400 - 500	Time:	
Field Personnel	D Ruckl + R. Martin	Weather Conditions	Clear 30s

INITIAL WELL DATA & WELL PURGING INFORMATION								More Info on Back? Yes/No
Time (0:00 - 23:59)	DTW (feet TOC)	Temp. (C)	Dissolved Oxygen (mg/L)	Specific Conductivity (mS/cm)	pH	ORP (mV)	Turbidity visual/meas. (NTUs)	Volume Purged (gallons/liters)
1302	5.85	11.4	7.19	0.090	6.72	63.6		
1305	5.81	11.6	7.11	0.089	6.72	61.3		
1308	5.81	11.6	7.11	0.090	6.68	61.0	0.18	
							0.18	
<b>Total Volume Purged</b>								1.5

Analytical Parameters	Number of bottles	Bottle size	Preserv.	Filtered? Y/N	Run? <input checked="" type="checkbox"/>	Notes
Explosives, Nitroglycerin, PETN, Picric Acid by 8330	2	1 L amber	none	N	<input type="checkbox"/>	
Perchlorates by EPA 6850	1	250 ml poly	none	Y	<input type="checkbox"/>	Fill w/~120 mL water
VOCs by 8260B	3	40 ml VOA	HCL	N	<input type="checkbox"/>	

Method of transportation of samples: Ship via FedEx to Anatek

**Field Observations/Notes of Sampling Event:**  
 PP Metals - 2 extra 250 mL poly  
 SVOC's - 2 extra 1 L ambers  
 9 bottles total

Signature of Field Personnel: *Daniel Ruckl* Date: 11 - 27 - 23



GROUNDWATER SAMPLING FIELD FORM

Revised: 7/26/2023

04Q 2023

PROJECT: Camp Bonneville

Clark County, Washington

PROJECT NO: 76151.012

Date: 11/27/2023

Initial DTW (feet bgs)	6.78	Monitoring Well ID:	LCM095
Screen Interval (feet bgs)	15-20	Sample ID	04Q03LCM095W
Well Depth (feet bgs)	22.38	Sample Time	1410
Depth of pump (ft bgs)	19	QC Sample type:	<input checked="" type="checkbox"/> Not collected
Sampling Method	Dedicated Bladder Pump		ID:
Purge rate (mL/min)	200		Time:
Field Personnel	D. Ruff, R. Martin	Weather Conditions	Clear 30's

INITIAL WELL DATA & WELL PURGING INFORMATION								More Info on Back? Yes/No
Time (0:00 - 23:59)	DTW (feet TOC)	Temp. (C)	Dissolved Oxygen (mg/L)	Specific Conductivity (mS/cm)	pH	ORP (mV)	Turbidity visual/meas. (NTUs)	Volume Purged (gallons/liters)
1343	7.60	10.8	7.92	0.087	6.30	85.5		
1346	7.67	11.1	7.60	0.087	6.31	81.4		
1350	7.71	10.8	7.50	0.087	6.28	79.8	< 79.8	
1354	7.72	10.9	7.37	0.087	6.19	82.1		
1358	7.73	11.2	7.24	0.087	6.16	82.7		
1401	7.74	11.1	7.18	0.087	6.14	82.8	0.43	
								1.5
<b>Total Volume Purged</b>								

Analytical Parameters	Number of bottles	Bottle size	Preserv.	Filtered? Y/N	Run? <input checked="" type="checkbox"/>	Notes
Explosives, Nitroglycerin, PETN, Picric Acid by 8330	2	1 L amber	none	N	<input type="checkbox"/>	
Perchlorates by EPA 6850	1	250 ml poly	none	Y	<input type="checkbox"/>	Fill w/~120 mL water
VOCs by 8260B	3	40 ml VOA	HCL	N	<input type="checkbox"/>	

Method of transportation of samples: Ship via FedEx to Anatek

**Field Observations/Notes of Sampling Event:**

PP Metals - 1 extra 250 mL poly

SVOCs - 2 extra 1 L ambers

9 bottles total

Signature of Field Personnel: *Dan Ruff* Date: 11-27-23



PBS Engineering + Environmental

### GROUNDWATER SAMPLING FIELD FORM

Revised: 7/26/2023

04Q 2023

PROJECT: Camp Bonneville

Clark County, Washington

PROJECT NO: 76151.012

Date: 11/27/2023

Initial DTW (feet bgs)	7.51	Monitoring Well ID:	LCMW09D
Screen Interval (feet bgs)	30-40	Sample ID	04Q23LCMW09DW
Well Depth (feet bgs)	42.27	Sample Time	1445
Depth of pump (ft bgs)	39	QC Sample type:	<input checked="" type="checkbox"/> Not collected
Sampling Method	Dedicated Bladder Pump	ID:	
Purge rate (mL/min)	200	Time:	
Field Personnel	D Rukki + R. Martin	Weather Conditions	Clear, 30's

INITIAL WELL DATA & WELL PURGING INFORMATION									More Info on Back? Yes/No
Time (0:00 - 23:59)	DTW (feet TOC)	Temp. (C)	Dissolved Oxygen (mg/L)	Specific Conductivity (mS/cm)	pH	ORP (mV)	Turbidity visual/meas. (NTUs)	Volume Purged (gallons/liters)	
1434	9.42	10.8	6.58	0.099	6.01	102.4			
1437	9.73	10.8	6.64	0.098	5.97	101.3			
1440	9.84	10.6	6.55	0.098	6.01	97.7			
1444	9.91	10.6	6.51	0.097	6.01	94.9	0.71	1.0	
									Total Volume Purged
									1.0

Analytical Parameters	Number of bottles	Bottle size	Preserv.	Filtered? Y/N	Run? <input checked="" type="checkbox"/>	Notes
Explosives, Nitroglycerin, PETN, Picric Acid by 8330	2	1 L amber	none	N	<input type="checkbox"/>	
Perchlorates by EPA 6850	1	250 ml poly	none	Y	<input type="checkbox"/>	Fill w/~120 mL water
VOCs by 8260B	3	40 ml VOA	HCL	N	<input type="checkbox"/>	

Method of transportation of samples: Ship via FedEx to Anatek

**Field Observations/Notes of Sampling Event:**

PP Metals - 1 extra 250 ml poly

SVOCs - 2 extra 1 L Ambers

9 bottles total

Signature of Field Personnel: *Donal Rukki* Date: 11-27-23

## DAILY FIELD ACTIVITY REPORT

**Project:** Camp Bonneville Groundwater Sampling and Analysis

**Date:** 11-28-23

**PBS Project No.** 76151.000

**Phase/Task:** 0002

WEATHER	(Bright Sun)	Clear	Overcast	Rain	Snow
TEMP (degrees F.)	To 32	32-50	50-70	70-85	85 up
WIND	(Still)	Moderate	High		
HUMIDITY	Dry	(Moderate)	High		

**PBS/Subcontractor Personnel and Duties:**

Name	Hours of Work	Employer	Description of Work
David Ruffi	11	PBS Engineering + Environmental	Groundwater monitoring
Riley Martin	11	PBS Engineering + Environmental	Groundwater monitoring

**Work Performed Today:** *See Groundwater Field Sampling Form for details of sampling at each well*

Groundwater Level Measurements <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Groundwater Sample Collection (list wells). 2 D (MS/MSD) 3 D 25 + 140 35	Other killpack Bonneville Range Road + DOPW
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**Remarks:** (i.e., instructions received or given; problems or deficiencies noted; delays encountered; other)

**List of Attachments:**

- Depth to Water Sheet:  Yes  No
- Groundwater Field Sampling Form:  Yes  No
- Lab Chain of Custody:  Yes  No *Scanned*
- Other \_\_\_\_\_
- Other \_\_\_\_\_

**Contractor's Verification:** On behalf of PBS Engineering + Environmental, I certify this report is complete and correct, and all work performed during this reporting period are in compliance with the contract Scope of Work and specifications, to the best of my knowledge, except as may be noted above.

*David Ruffi*

*11/28/23*

Name

Date





PBS Engineering and Environmental

**DRINKING WATER  
SAMPLING FIELD FORM**

Revised: 11/27/23

04Q 2023

PROJECT: Camp Bonneville

Clark County, Washington

PROJECT NO: 76151.012

Date: 11/28/2023

Field Personnel: D. Ruck + R. Martin

Surface Water Location: Range Road

Weather Conditions: Clear 30's

Start Time: 11:15

**DRINKING WATER DATA AND INFORMATION**

Time (0:00 - 23:59)	Water Temperature (degree C)	Dissolved Oxygen (mg/L)	Specific Conductivity (mS/cm)	Water pH (S.U.)	ORP (mV)	Turbidity visual/meas. (NTUs)
11:20	9.4	6.72	0.099	5.99	95.0	6.87

**WATER CONDITIONS**

Clear water, no odor

DUPW 11:30

QA/QC Sample (circle one) Duplicate Lab MS/MSD Equipment Blank None

Sample ID:

Sample Time:

Analytical Parameters	Number of bottles	Bottle size	Preserv.	Filtered? Y/N	Notes
RDX by 8330	2	1L amber	none	N	
Perchlorates by EPA 6850	1	250 ml poly	none	Y	Fill w/~120 mL water

Method of transportation of samples: Ship via FedEx to Anatek

**Field Observations/Notes of Sampling Event:**

FBI range active, power on

Signature of Field Personnel: *Daniel Ruck*

Date: 11-28-23



PBS Engineering and Environmental

**DRINKING WATER  
SAMPLING FIELD FORM**

Revised: 11/27/23

04Q 2023

PROJECT: Camp Bonneville

Clark County, Washington

PROJECT NO: 76151.012

Date: 11/28/2023

Field Personnel: D. Rukky + R. Martin

Surface Water Location: Bonneville

Weather Conditions: Clear 30's

Start Time: 1154

**DRINKING WATER DATA AND INFORMATION**

Time (0:00 - 23:59)	Water Temperature (degree C)	Dissolved Oxygen (mg/L)	Specific Conductivity (mS/cm)	Water pH (S.U.)	ORP (mV)	Turbidity visual/meas. (NTUs)
1200	12.0	2.94	0.132	7.54	31.5	11.6

**WATER CONDITIONS**

Clear water, no odors

QA/QC Sample (circle one): Duplicate Lab MS/MSD Equipment Blank None

Sample ID:

Sample Time:

Analytical Parameters	Number of bottles	Bottle size	Preserv.	Filtered? Y/N	Notes
RDX by 8330	2	1L amber	none	N	
Perchlorates by EPA 6850	1	250 ml poly	none	Y	Fill w/~120 mL water

Method of transportation of samples: Ship via FedEx to Anatek

**Field Observations/Notes of Sampling Event:**

Signature of Field Personnel:

*Daniel Rukky*

Date: 11-28-23



PBS Engineering and Environmental

**DRINKING WATER  
SAMPLING FIELD FORM**

Revised: 11/27/23

04Q 2023

PROJECT: Camp Bonneville  
Clark County, Washington

PROJECT NO: 76151.012

Date: 11/28/2023

Field Personnel: D. Rukki + R. Martin

Surface Water Location: Killpack

Weather Conditions: Clear, 30's

Start Time: 1250

**DRINKING WATER DATA AND INFORMATION**

Time (0:00 - 23:59)	Water Temperature (degree C)	Dissolved Oxygen (mg/L)	Specific Conductivity (mS/cm)	Water pH (S.U.)	ORP (mV)	Turbidity visual/meas. (NTUs)
1300	13.3	<del>10.9</del> 5.44	0.130	7.90	12.8	3.92

**WATER CONDITIONS**

Clear, no odors

QA/QC Sample (circle one): Duplicate Lab MS/MSD Equipment Blank None

Sample ID:

Sample Time:

Analytical Parameters	Number of bottles	Bottle size	Preserv.	Filtered? Y/N	Notes
RDX by 8330	2	1L amber	none	N	
Perchlorates by EPA 6850	1	250 ml poly	none	Y	Fill w/~120 mL water

Method of transportation of samples: Ship via FedEx to Anatek

**Field Observations/Notes of Sampling Event:**

Turn power to "hand"

14 bottles total

Signature of Field Personnel: *D. Rukki*

Date: 11/28/23



PBS Engineering + Environmental

**GROUNDWATER SAMPLING FIELD FORM**

Revised: 11/27/23

04Q 2023

PROJECT: Camp Bonneville  
Clark County, Washington

PROJECT NO: 76151.012

Date: 11/28/2023

Initial DTW (feet bgs)	5.98	Monitoring Well ID:	LCMWORD
Screen Interval (feet bgs)	25-35	Sample ID	04Q23LCMWORDW
Well Depth (feet bgs)	38.1	Sample Time	845
Depth of pump (ft bgs)	35	QC Sample type:	<input type="checkbox"/> Not collected
Sampling Method	Dedicated Bladder Pump	MS/MSD	ID:
Purge rate (mL/min)	360		Time:
Field Personnel	D. Ruhl, & R. Martin	Weather Conditions	Clear 30's

INITIAL WELL DATA & WELL PURGING INFORMATION								More Info on Back? Yes/No	
Time (0:00 - 23:59)	DTW (feet TOC)	Temp. (C)	Dissolved Oxygen (mg/L)	Specific Conductivity (mS/cm)	pH	ORP (mV)	Turbidity visual/meas. (NTUs)	Volume Purged (gallons/liters)	
835	8.26	10.6	7.84	0.091	6.02	62.6			
838	8.36	10.5	7.88	0.092	6.03	62.9			
841	8.41	10.6	7.83	0.091	6.04	63.3	0.09		
								Total Volume Purged	2.00

Analytical Parameters	Number of bottles	Bottle size	Preserv.	Filtered? Y/N	Run? <input checked="" type="checkbox"/>	Notes
Explosives, Nitroglycerin, PETN, Picric Acid by 8330	6	1L amber	none	N	<input type="checkbox"/>	
Perchlorates by EPA 6850	1	250 ml poly	none	Y	<input type="checkbox"/>	Fill w/~200 mL water
VOCs by 8260B	7	40 ml VOA	HCL	N	<input type="checkbox"/>	

Method of transportation of samples: Shipped via FedEx to Anatek

**Field Observations/Notes of Sampling Event:**

Sample includes MS/MSD. Cooler was labeled as 2D but had 6 2A ambers. Concluded that the 2A label was a mistake because analysis said SVOC's, and only 2B gets SVOC's. Plus this is MS/MSD. Total of 17 ambers 7 VOA's and 2 polys.

Signature of Field Personnel: *[Signature]* Date: 11-28-23





PBS Engineering + Environmental

**GROUNDWATER  
SAMPLING FIELD FORM**

Revised: 11/27/2023

04Q 2023

PROJECT: Camp Bonneville  
Clark County, Washington

PROJECT NO: 76151.012

Date: 11/28/2023

Initial DTW (feet bgs)	5.77	Monitoring Well ID:	LCMW03S
Screen Interval (feet bgs)	13-18	Sample ID	04Q23LCMW03SW
Well Depth (feet bgs)	20.33	Sample Time	1035
Depth of pump (ft bgs)	18	QC Sample type:	<input checked="" type="checkbox"/> Not collected
Sampling Method	Dedicated Bladder Pump	ID:	
Purge rate (mL/min)	400	Time:	
Field Personnel	D. Rukt. + R Martin	Weather Conditions	Clear 30's

**INITIAL WELL DATA & WELL PURGING INFORMATION**

More Info on Back? Yes/No

Time (0:00 - 23:59)	DTW (feet TOC)	Temp. (C)	Dissolved Oxygen (mg/L)	Specific Conductivity (mS/cm)	pH	ORP (mV)	Turbidity visual/meas. (NTUs)	Volume Purged (gallons/liters)
1024	5.32	11.0	7.99	0.104	6.53	66.3		
1027	5.30	11.0	7.72	0.104	6.49	68.0		
1030	5.28	11.1	7.62	0.101	6.43	70.6		
1033	5.25	11.0	7.64	0.104	6.38	72.4		
							2.9	
<b>Total Volume Purged</b>								<b>1.75</b>

Analytical Parameters	Number of bottles	Bottle size	Preserv.	Filtered? Y/N	Run? <input checked="" type="checkbox"/>	Notes
Explosives, Nitroglycerin, PETN, Picric Acid by 8330	2	1 L amber	none	N	<input type="checkbox"/>	
Perchlorates by EPA 6850	1	250 ml poly	none	Y	<input type="checkbox"/>	Fill w/~120 mL water
VOCs by 8260B	3	40 ml VOA	HCL	N	<input type="checkbox"/>	

Method of transportation of samples: Ship via FedEx to Anatek

**Field Observations/Notes of Sampling Event:**

PP-Metals - 1 extra 250 ml poly
SVOCs - 2 extra 1 L ambers
9 bottles total
Signature of Field Personnel: <i>Daniel Miller</i>
Date: 11/28/23



## DAILY FIELD ACTIVITY REPORT

Project: Camp Bonneville Groundwater Sampling and Analysis

Date: 11-29-23

PBS Project No. 76151-01a

Phase/Task: 000a

WEATHER	Bright Sun	Clear	Overcast	Rain	Snow
TEMP (degrees F.)	To 32	32-50	50-70	70-85	85 up
WIND	Still	Moderate	High		
HUMIDITY	Dry	Moderate	High		

**PBS/Subcontractor Personnel and Duties:**

Name	Hours of Work	Employer	Description of Work
David Rukki	11	PBS Engineering + Environmental	Groundwater monitoring
R. Iry Martin	11	PBS Engineering + Environmental	Groundwater monitoring

**Work Performed Today:** See Groundwater Field Sampling Form for details of sampling at each well

Groundwater Level Measurements	Groundwater Sample Collection (list wells).	Other
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	LCMW04S LCMW04D L4MW17 L4MW18 (MS/MSD)	L4MW01A L4MW01B L4MW07B L4MW04A L4MW05A

Remarks: (i.e., instructions received or given; problems or deficiencies noted; delays encountered; other)

**List of Attachments:**

- Depth to Water Sheet:  Yes  No
- Groundwater Field Sampling Form:  Yes  No
- Lab Chain of Custody:  Yes  No *Scanned*
- Other \_\_\_\_\_
- Other \_\_\_\_\_

**Contractor's Verification:** On behalf of PBS Engineering + Environmental, I certify this report is complete and correct, and all work performed during this reporting period are in compliance with the contract Scope of Work and specifications, to the best of my knowledge, except as may be noted above.

*David Rukki*  
Name

11/29/23  
Date







**GROUNDWATER  
SAMPLING FIELD FORM**

Revised: 11/27/2023

04Q 2023

PROJECT: Camp Bonneville  
Clark County, Washington

PROJECT NO: 76151.012

Date: 11/29/2023

Initial DTW (feet bgs)	5.54	Monitoring Well ID:	LCMW04D
Screen Interval (feet bgs)	24.5 - 34.5	Sample ID	04Q23LLMW04DW
Well Depth (feet bgs)	37.13	Sample Time	900
Depth of pump (ft bgs)	35	QC Sample type:	<input checked="" type="checkbox"/> Not collected
Sampling Method	Dedicated Bladder Pump	ID:	
Purge rate (mL/min)	200-280	Time:	
Field Personnel	D. Ruff & R. Martin	Weather Conditions	Clear, 30's

INITIAL WELL DATA & WELL PURGING INFORMATION								More Info on Back? Yes/No	
Time (0:00 - 23:59)	DTW (feet TOC)	Temp. (C)	Dissolved Oxygen (mg/L)	Specific Conductivity (mS/cm)	pH	ORP (mV)	Turbidity visual/meas. (NTUs)	Volume Purged (gallons/liters)	
848	7.43	10.0	8.12	0.096	5.91	80.5			
851	7.67	10.1	8.00	0.096	6.08	74.3			
854	7.85	10.2	7.93	0.096	6.10	74.9			
857	7.79	9.9	7.97	0.096	6.11	76.0			
900	7.75	10.0	7.98	0.096	6.08	78.4	1.99		
							1.99		
<b>Total Volume Purged</b>								1.25	

Analytical Parameters	Number of bottles	Bottle size	Preserv.	Filtered? Y/N	Run? <input checked="" type="checkbox"/>	Notes
Explosives, Nitroglycerin, PETN, Picric Acid by 8330	2	1 L amber	none	N	<input type="checkbox"/>	
Perchlorates by EPA 6850	1	250 ml poly	none	Y	<input type="checkbox"/>	Fill w/~120 mL water
VOCs by 8260B	3	40 ml VOA	HCL	N	<input type="checkbox"/>	

Method of transportation of samples: Ship via FedEx to Anatek

**Field Observations/Notes of Sampling Event:**

PP Metals - 1 extra 250 ml poly

SVOCs - 2 extra 1 L amber

WELL WAS FROZEN

Signature of Field Personnel: *Daniel Martin*

Date: 11-29-23



PBS Engineering + Environmental

**GROUNDWATER  
SAMPLING FIELD FORM**

Revised: 11/27/2023

04Q 2023

PROJECT: Camp Bonneville  
Clark County, Washington

PROJECT NO: 76151.012

Date: 11/29/2023

Initial DTW (feet bgs)	11.09	Monitoring Well ID:	L4MW17
Screen Interval (feet bgs)	5-15	Sample ID	04Q23L4MW17W
Well Depth (feet bgs)	17.67	Sample Time	1020
Depth of pump (ft bgs)	15	QC Sample type:	<input checked="" type="checkbox"/> Not collected
Sampling Method	Dedicated Bladder Pump	ID:	
Purge rate (mL/min)	140	Time:	
Field Personnel	D. Rakki + R. Martin	Weather Conditions	Clear, 30%

**INITIAL WELL DATA & WELL PURGING INFORMATION** More Info on Back? Yes/No

Time (0:00 - 23:59)	DTW (feet TOC)	Temp. (C)	Dissolved Oxygen (mg/L)	Specific Conductivity (mS/cm)	pH	ORP (mV)	Turbidity visual/meas. (NTUs)	Volume Purged (gallons/liters)
1006	11.83	10.6	7.39	0.229	6.79	50.4		
1010	11.93	10.8	7.06	0.230	6.79	52.1		
1013	12.10	10.8	7.00	0.229	6.80	53.9		
1617	12.21	10.8	6.96	0.229	6.80	55.0	12.3	
							12.3	
<b>Total Volume Purged</b>								1 gal

Analytical Parameters	Number of bottles	Bottle size	Preserv.	Filtered? Y/N	Run? <input type="checkbox"/>	Notes
Explosives, Nitroglycerin, PETN, Picric Acid by 8330	2	1 L amber	none	N	<input type="checkbox"/>	
Perchlorates by EPA 6850	1	250 ml poly	none	Y	<input type="checkbox"/>	Fill w/~120 mL water
VOCs by 8260B	3	40 ml VOA	HCL	N	<input type="checkbox"/>	

Method of transportation of samples: Ship via FedEx to Anatek

**Field Observations/Notes of Sampling Event:**

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Signature of Field Personnel: *[Signature]* Date: 11-29-23







PBS Engineering + Environmental

**GROUNDWATER  
SAMPLING FIELD FORM**

Revised: 11/27/2023

04Q 2023

PROJECT: Camp Bonneville  
Clark County, Washington

PROJECT NO: 76151.012

Date: 11/29/2023

Initial DTW (feet bgs)	17.01	Monitoring Well ID:	L4MWO1A
Screen Interval (feet bgs)	17-27	Sample ID	04Q23L4MWO1AW
Well Depth (feet bgs)	304	Sample Time	1300
Depth of pump (ft bgs)	27.5	QC Sample type:	<input checked="" type="checkbox"/> Not collected
Sampling Method	Dedicated Bladder Pump		ID:
Purge rate (mL/min)	200-280		Time:
Field Personnel	D. Rukki + R. Martin	Weather Conditions	Cloudy, 30%

INITIAL WELL DATA & WELL PURGING INFORMATION					More Info on Back? Yes/No			
Time (0:00 - 23:59)	DTW (feet TOC)	Temp. (C)	Dissolved Oxygen (mg/L)	Specific Conductivity (mS/cm)	pH	ORP (mV)	Turbidity visual/meas. (NTUs)	Volume Purged (gallons/liters)
1353	17.96	10.1	6.23	0.025	4.63	94.5		
1356	17.98	10.1	6.28	0.025	4.57	98.4		
1359	18.06	10.1	6.28	0.025	4.52	102.1		
1303	18.12	10.1	6.19	0.025	4.47	105.5	1.78	
Total Volume Purged								1.5

Analytical Parameters	Number of bottles	Bottle size	Preserv.	Filtered? Y/N	Run? ✓	Notes
Explosives, Nitroglycerin, PETN, Picric Acid by 8330	2	1 L amber	none	N	<input type="checkbox"/>	
Perchlorates by EPA 6850	1	250 ml poly	none	Y	<input type="checkbox"/>	Fill w/~120 mL water
VOCs by 8260B	3	40 ml VOA	HCL	N	<input type="checkbox"/>	

Method of transportation of samples: Ship via FedEx to Anatek

**Field Observations/Notes of Sampling Event:**

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Signature of Field Personnel: *[Signature]* Date: 11-29-23



PBS Engineering + Environmental

GROUNDWATER SAMPLING FIELD FORM

Revised: 11/27/2023

04Q 2023

PROJECT: Camp Bonneville Clark County, Washington

PROJECT NO: 76151.012

Date: 11/29/2023

Initial DTW (feet bgs)	14.05	Monitoring Well ID:	L4MWO1B
Screen Interval (feet bgs)	43-53	Sample ID	04023L4MWO1BW
Well Depth (feet bgs)	56	Sample Time	1345
Depth of pump (ft bgs)	51	QC Sample type:	<input checked="" type="checkbox"/> Not collected
Sampling Method	Dedicated Bladder Pump	ID:	
Purge rate (mL/min)	440	Time:	
Field Personnel	D. Rukh, + R. Martin	Weather Conditions	Cloudy 30's

INITIAL WELL DATA & WELL PURGING INFORMATION More Info on Back? Yes/No

Time (0:00 - 23:59)	DTW (feet TOC)	Temp. (C)	Dissolved Oxygen (mg/L)	Specific Conductivity (mS/cm)	pH	ORP (mV)	Turbidity visual/meas. (NTUs)	Volume Purged (gallons/liters)
1328	14.42	10.2	9.13	0.026	4.62	112.7		
1331	14.43	10.2	9.12	0.026	4.63	113.1		
1334	14.44	10.2	9.02	0.026	4.63	113.1	1.14	
<b>Total Volume Purged</b>								2.00

Analytical Parameters	Number of bottles	Bottle size	Preserv.	Filtered? Y/N	Run? ✓	Notes
Explosives, Nitroglycerin, PETN, Picric Acid by 8330	2	1 L amber	none	N	<input type="checkbox"/>	
Perchlorates by EPA 6850	1	250 ml poly	none	Y	<input type="checkbox"/>	Fill w/~120 mL water
VOCs by 8260B	3	40 ml VOA	HCL	N	<input type="checkbox"/>	

Method of transportation of samples: Ship via FedEx to Anatek

**Field Observations/Notes of Sampling Event:**

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**Signature of Field Personnel:** *[Handwritten Signature]* **Date:** 11-29-23





## DAILY FIELD ACTIVITY REPORT

Project: Camp Bonneville Groundwater Sampling and Analysis

Date: 11-30-23

PBS Project No. 76151.012

Phase/Task: 0002

WEATHER	Bright Sun	Clear	<u>Overcast</u>	<u>Rain</u>	Snow
TEMP (degrees F.)	To 32	<u>32-50</u>	50-70	70-85	85 up
WIND	Still	<u>Moderate</u>	High		
HUMIDITY	Dry	<u>Moderate</u>	High		

**PBS/Subcontractor Personnel and Duties:**

Name	Hours of Work	Employer	Description of Work
David Rukki	11	PBS Engineering + Environmental	Groundwater monitoring
Riley Martin	11	PBS Engineering + Environmental	Groundwater monitoring

**Work Performed Today:** See Groundwater Field Sampling Form for details of sampling at each well

Groundwater Level Measurements	Groundwater Sample Collection (list wells).	Other
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	L4MW03B L4MW03A L4MW02A (145) L4MW02B (150)	L4MW11B L4MW10B L4MW10A

**Remarks:** (i.e., instructions received or given; problems or deficiencies noted; delays encountered; other)

**List of Attachments:**

- Depth to Water Sheet:  Yes  No
- Groundwater Field Sampling Form:  Yes  No
- Lab Chain of Custody:  Yes  No *Scanned*
- Other \_\_\_\_\_
- Other \_\_\_\_\_

**Contractor's Verification:** On behalf of PBS Engineering + Environmental, I certify this report is complete and correct, and all work performed during this reporting period are in compliance with the contract Scope of Work and specifications, to the best of my knowledge, except as may be noted above.

*David Rukki* 11-30-23  
 Name Date





PBS Engineering + Environmental

**GROUNDWATER SAMPLING FIELD FORM**

Revised: 11/27/2023

04Q 2023

PROJECT: Camp Bonneville  
Clark County, Washington

PROJECT NO: 76151.012

Date: 11/30/2023

Initial DTW (feet bgs)	27.70	Monitoring Well ID:	L4MWO3B
Screen Interval (feet bgs)	50-60	Sample ID	04Q23L4MWO3BW
Well Depth (feet bgs)	63	Sample Time	915
Depth of pump (ft bgs)	59	QC Sample type:	<input checked="" type="checkbox"/> Not collected
Sampling Method	Dedicated Bladder Pump	ID:	
Purge rate (mL/min)	140-150	Time:	
Field Personnel	D. Rakki + R. Martin	Weather Conditions	Cloudy 30's

**INITIAL WELL DATA & WELL PURGING INFORMATION**

More Info on Back? Yes/No

Time (0:00 - 23:59)	DTW (feet TOC)	Temp. (C)	Dissolved Oxygen (mg/L)	Specific Conductivity (mS/cm)	pH	ORP (mV)	Turbidity visual/meas. (NTUs)	Volume Purged (gallons/liters)
831	29.33	9.1	6.65	0.039	6.52	92.4		
834	29.45	9.0	6.40	0.038	6.19	98.0		
837	29.56	9.1	6.39	0.039	5.98	99.9		
841	29.67	9.0	6.49	0.042	5.78	99.1		
847	29.87	9.1	6.48	0.043	5.56	98.8		
850	29.92	9.1	6.42	0.043	5.49	98.4		
854	29.96	9.3	6.52	0.043	5.44	97.5		
857	30.03	9.3	6.40	0.044	5.38	97.9		
900	30.08	9.3	6.51	0.044	5.39	96.4	0.20	
							0.20	1.5
<b>Total Volume Purged</b>								

Analytical Parameters	Number of bottles	Bottle size	Preserv.	Filtered? Y/N	Run? ✓	Notes
Explosives, Nitroglycerin, PETN, Picric Acid by 8330	2	1 L amber	none	N	<input type="checkbox"/>	
Perchlorates by EPA 6850	1	250 ml poly	none	Y	<input type="checkbox"/>	Fill w/~120 mL water
VOCs by 8260B	3	40 ml VOA	HCL	N	<input type="checkbox"/>	

Method of transportation of samples: Ship via FedEx to Anatek

**Field Observations/Notes of Sampling Event:**


Signature of Field Personnel: *Dan Rakki*

Date: 11-30-23



PBS Engineering + Environmental

**GROUNDWATER  
SAMPLING FIELD FORM**

Revised: 11/27/2023

04Q 2023

PROJECT: Camp Bonneville  
Clark County, Washington

PROJECT NO: 76151.012

Date: 11/30/2023

Initial DTW (feet bgs)	30.35	Monitoring Well ID:	L4MWO3A
Screen Interval (feet bgs)	41-46	Sample ID	04Q23L4MWO3Aw
Well Depth (feet bgs)	49	Sample Time	945
Depth of pump (ft bgs)	47	QC Sample type:	<input checked="" type="checkbox"/> Not collected
Sampling Method	Dedicated Bladder Pump	ID:	
Purge rate (mL/min)	370-400	Time:	
Field Personnel	D. Rukk. + R. Martin	Weather Conditions	Cloudy 30's

INITIAL WELL DATA & WELL PURGING INFORMATION					More Info on Back? Yes/No			
Time (0:00 - 23:59)	DTW (feet TOC)	Temp. (C)	Dissolved Oxygen (mg/L)	Specific Conductivity (mS/cm)	pH	ORP (mV)	Turbidity visual/meas. (NTUs)	Volume Purged (gallons/liters)
932	31.92	10.1	7.45	0.021	5.18	97.8		
936	32.06	10.2	7.30	0.021	5.29	93.3		
940	32.22	10.2	7.23	0.021	5.18	98.6		
							0.31	
Total Volume Purged								1.5

Analytical Parameters	Number of bottles	Bottle size	Preserv.	Filtered? Y/N	Run? <input checked="" type="checkbox"/>	Notes
Explosives, Nitroglycerin, PETN, Picric Acid by 8330	2	1 L amber	none	N	<input type="checkbox"/>	
Perchlorates by EPA 6850	1	250 ml poly	none	Y	<input type="checkbox"/>	Fill w/~120 mL water
VOCs by 8260B	3	40 ml VOA	HCL	N	<input type="checkbox"/>	

Method of transportation of samples: Ship via FedEx to Anatek

Field Observations/Notes of Sampling Event:

Signature of Field Personnel: *[Signature]* Date: 11-30-23



PBS Engineering + Environmental

**GROUNDWATER  
SAMPLING FIELD FORM**

Revised: 11/27/2023

04Q 2023

PROJECT: Camp Bonneville  
Clark County, Washington

PROJECT NO: 76151.012

Date: 11/30/2023

Initial DTW (feet bgs)	27.46	Monitoring Well ID:	L4MWO2A
Screen Interval (feet bgs)	27-37	Sample ID	04Q23L4MWO2AW
Well Depth (feet bgs)	40.2	Sample Time	04023L4MWO2AW 1035
Depth of pump (ft bgs)	37.3	QC Sample type:	<input type="checkbox"/> Not collected
Sampling Method	Dedicated Bladder Pump	DUP 145	ID: 04Q23L4MWO2AW
Purge rate (mL/min)	400	Weather Conditions	Rain 30's
Field Personnel	D. Rukli + R. Martin		

**INITIAL WELL DATA & WELL PURGING INFORMATION**

More Info on Back? Yes/No

Time (0:00 - 23:59)	DTW (feet TOC)	Temp. (C)	Dissolved Oxygen (mg/L)	Specific Conductivity (mS/cm)	pH	ORP (mV)	Turbidity visual/meas. (NTUs)	Volume Purged (gallons/liters)
1017	28.17	10.6	8.35	0.019	4.80	118.6		
1021	28.16	10.6	8.28	0.018	4.79	122.3		
1025	28.23	10.6	8.24	0.019	4.66	128.1		
1028	28.27	10.6	8.12	0.019	4.62	131.4		
1031	28.30	10.7	8.03	0.019	4.59	135.1		
							0.71	
<b>Total Volume Purged</b>								<b>3</b>

Analytical Parameters	Number of bottles	Bottle size	Preserv.	Filtered? Y/N	Run? <input checked="" type="checkbox"/>	Notes
Explosives, Nitroglycerin, PETN, Picric Acid by 8330	2	1 L amber	none	N	<input type="checkbox"/>	
Perchlorates by EPA 6850	1	250 ml poly	none	Y	<input type="checkbox"/>	Fill w/~120 mL water
VOCs by 8260B	3	40 ml VOA	HCL	N	<input type="checkbox"/>	

Method of transportation of samples: Ship via FedEx to Anatek

**Field Observations/Notes of Sampling Event:**


Signature of Field Personnel: *Danielle Latta*

Date: 11-30-23



PBS Engineering + Environmental

**GROUNDWATER  
SAMPLING FIELD FORM**

Revised: 11/27/2023  
04Q 2023

PROJECT: Camp Bonneville  
Clark County, Washington

PROJECT NO: 76151.012

Date: 11/30/2023

Initial DTW (feet bgs)	32.24	Monitoring Well ID:	L4MW02B
Screen Interval (feet bgs)	62.72	Sample ID	04Q23L4MW02BW
Well Depth (feet bgs)	75	Sample Time	1210
Depth of pump (ft bgs)	70	QC Sample type:	<input type="checkbox"/> Not collected
Sampling Method	Dedicated Bladder Pump	DUP 150	ID:04Q23L4MW150W
Purge rate (mL/min)	140 <small>SEE NOTES</small>	Weather Conditions	Rain 30%
Field Personnel	D. Rukt. + R. Martin		Time: 830

INITIAL WELL DATA & WELL PURGING INFORMATION					More Info on Back? Yes/No			
Time (0:00 - 23:59)	DTW (feet TOC)	Temp. (C)	Dissolved Oxygen (mg/L)	Specific Conductivity (mS/cm)	pH	ORP (mV)	Turbidity visual/meas. (NTUs)	Volume Purged (gallons/liters)
1123	36.95	10.1	4.82	0.037	5.05	128.9		
1127	36.36	10.1	4.82	0.037	5.04	128.8		
1130	36.54	9.9	4.83	0.037	5.02	129.7		
1134	36.96	10.0	4.73	0.038	4.99	131.3		
1139	36.84	9.3	4.63	0.038	5.02	129.8		
1142	36.71	9.1	4.56	0.038	4.88	136.2		
1148	36.65	9.4	4.35	0.039	4.81	138.7		
1152	36.55	9.2	3.90	0.041	4.99	134.7		
1155	36.51	9.4	3.62	0.042	4.93	132.6		
1158	36.48	9.5	3.43	0.042	4.98	130.0		
1201	36.46	9.5	3.42	0.043	5.03	126.3	0.02	
Total Volume Purged								1.75

Analytical Parameters	Number of bottles	Bottle size	Preserv.	Filtered? Y/N	Run? <input checked="" type="checkbox"/>	Notes
Explosives, Nitroglycerin, PETN, Picric Acid by 8330	2	1 L Amber	none	N	<input type="checkbox"/>	
Perchlorates by EPA 6850	1	250 ml poly	none	Y	<input type="checkbox"/>	Fill w/~120 mL water
VOCs by 8260B	3	40 ml VOA	HCL	N	<input type="checkbox"/>	

Method of transportation of samples: Ship via FedEx to Anatek

Field Observations/Notes of Sampling Event:		TIME	TAROMIG
HAD TO GO UNDER 140 mL/min		2:0	125
Signature of Field Personnel: <i>Daniel Rukt.</i>		Date: 11-30-23	







PBS Engineering + Environmental

GROUNDWATER SAMPLING FIELD FORM

Revised: 11/27/2023

04Q 2023

PROJECT: Camp Bonneville Clark County, Washington

PROJECT NO: 76151.012

Date: 11/30/2023

Initial DTW (feet bgs)	31.83	Monitoring Well ID:	L4MW10A
Screen Interval (feet bgs)	30-40	Sample ID	04Q03L4MW10AW
Well Depth (feet bgs)	42.43	Sample Time	1550
Depth of pump (ft bgs)	39	QC Sample type:	<input checked="" type="checkbox"/> Not collected
Sampling Method	Dedicated Bladder Pump	ID:	
Purge rate (mL/min)	200	Time:	
Field Personnel	D. Ruckl + R. Martin	Weather Conditions	Rain 30's

INITIAL WELL DATA & WELL PURGING INFORMATION								More Info on Back? Yes/No	
Time (0:00 - 23:59)	DTW (feet TOC)	Temp. (C)	Dissolved Oxygen (mg/L)	Specific Conductivity (mS/cm)	pH	ORP (mV)	Turbidity visual/meas. (NTUs)	Volume Purged (gallons/liters)	
1513	33.13	9.8	6.18	0.020	4.71	128.6			
1516	33.15	9.6	5.97	0.020	4.79	124.8			
1519	33.17	9.2	5.97	0.020	4.78	126.6			
1523	32.89	8.5	5.98	0.020	4.73	129.9			
1527	32.65	7.7	5.89	0.020	4.63	134.8			
1530	32.50	7.0	5.79	0.020	4.52	141.3			
1536	33.16	10.0	5.79	0.020	4.33	150.1			
1539	33.23	9.9	5.87	0.019	4.61	<del>135.9</del>	< 137.6		
1542	33.19	10.0	5.93	0.019	4.66	135.9			
1545	33.31	10.0	6.01	0.019	4.68	135.7	3.95		
							3.95		
Total Volume Purged								1.5	

Analytical Parameters	Number of bottles	Bottle size	Preserv.	Filtered? Y/N	Run? <input checked="" type="checkbox"/>	Notes
Explosives, Nitroglycerin, PETN, Picric Acid by 8330	2	1 L amber	none	N	<input type="checkbox"/>	
Perchlorates by EPA 6850	1	250 ml poly	none	Y	<input type="checkbox"/>	Fill w/~120 mL water
VOCs by 8260B	3	40 ml VOA	HCL	N	<input type="checkbox"/>	

Method of transportation of samples: Ship via FedEx to Anatek

Field Observations/Notes of Sampling Event:

Signature of Field Personnel: *Daniel Ruckl*

Date: 11-30-23

## DAILY FIELD ACTIVITY REPORT

Project: Camp Bonneville Groundwater Sampling and Analysis

Date: 12-1-23

PBS Project No. 76151 01a

Phase/Task: 000a

WEATHER	Bright Sun	Clear	Overcast	<u>Rain</u>	Snow
TEMP (degrees F.)	To 32	<u>32-50</u>	50-70	70-85	85 up
WIND	Still	<u>Moderate</u>	High		
HUMIDITY	Dry	<u>Moderate</u>	High		

**PBS/Subcontractor Personnel and Duties:**

Name	Hours of Work	Employer	Description of Work
David Rukk	8	PBS Engineering + Environmental	Groundwater monitoring
Riley Martin	8	PBS Engineering + Environmental	Groundwater monitoring

**Work Performed Today:** See Groundwater Field Sampling Form for details of sampling at each well

Groundwater Level Measurements	Groundwater Sample Collection (list wells).	Other
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	L4Mw09A      L4Mw08B L4Mw09B      L4Mw08A	

**Remarks:** (i.e., instructions received or given; problems or deficiencies noted; delays encountered; other)

**List of Attachments:**

- Depth to Water Sheet:  Yes  No
- Groundwater Field Sampling Form:  Yes  No
- Lab Chain of Custody:  Yes  No *Scanned*
- Other \_\_\_\_\_
- Other \_\_\_\_\_

**Contractor's Verification:** On behalf of PBS Engineering + Environmental, I certify this report is complete and correct, and all work performed during this reporting period are in compliance with the contract Scope of Work and specifications, to the best of my knowledge, except as may be noted above.

David Rukk      12-1-23  
 Name      Date





PBS Engineering + Environmental

**GROUNDWATER  
SAMPLING FIELD FORM**

Revised: 11/27/2023

04Q 2023

PROJECT: Camp Bonneville

Clark County, Washington

PROJECT NO: 76151.012

Date: 12/1/2023

Initial DTW (feet bgs)	31.67	Monitoring Well ID:	L4MWO9A
Screen Interval (feet bgs)	30-40	Sample ID	04Q03L4MWO9AW
Well Depth (feet bgs)	42.43	Sample Time	945
Depth of pump (ft bgs)	39	QC Sample type:	<input checked="" type="checkbox"/> Not collected
Sampling Method	Dedicated Bladder Pump	ID:	
Purge rate (mL/min)	200	Time:	
Field Personnel	D. Rukk + R. Martin	Weather Conditions	Rain 30's

**INITIAL WELL DATA & WELL PURGING INFORMATION**

More Info on Back? Yes/No

Time (0:00 - 23:59)	DTW (feet TOC)	Temp. (C)	Dissolved Oxygen (mg/L)	Specific Conductivity (mS/cm)	pH	ORP (mV)	Turbidity visual/meas. (NTUs)	Volume Purged (gallons/liters)
911	32.92	10.3	7.79	0.024	5.74	132.9		
920	32.91	10.0	7.67	0.022	4.35	133.1		
925	33.11	10.0	7.52	0.022	4.16	129.8		
928	33.10	10.1	7.38	0.023	4.14	120.9		
931	33.15	9.9	7.41	0.022	4.11	119.6	1.46	
							1.46	
<b>Total Volume Purged</b>								1.5

Analytical Parameters	Number of bottles	Bottle size	Preserv.	Filtered? Y/N	Run? <input checked="" type="checkbox"/>	Notes
Explosives, Nitroglycerin, PETN, Picric Acid by 8330	2	1 L amber	none	N	<input type="checkbox"/>	
Perchlorates by EPA 6850	1	250 ml poly	none	Y	<input type="checkbox"/>	Fill w/~120 mL water
VOCs by 8260B	3	40 ml VOA	HCL	N	<input type="checkbox"/>	

Method of transportation of samples: Ship via FedEx to Anatek

**Field Observations/Notes of Sampling Event:**


Signature of Field Personnel:

Date: 12-1-23





PBS Engineering + Environmental

**GROUNDWATER  
SAMPLING FIELD FORM**

Revised: 11/27/2023

04Q 2023

PROJECT: Camp Bonneville  
Clark County, Washington

PROJECT NO: 76151.012

Date: 12/1/2023

Initial DTW (feet bgs)	42.63	Monitoring Well ID:	L4MW08B
Screen Interval (feet bgs)	55-65	Sample ID	04023L4MW08BW
Well Depth (feet bgs)	67.31	Sample Time	1200
Depth of pump (ft bgs)	64	QC Sample type:	<input checked="" type="checkbox"/> Not collected
Sampling Method	Dedicated Bladder Pump	ID:	
Purge rate (mL/min)	200-225	Time:	
Field Personnel	D. Rutt, R. Martin	Weather Conditions	Rain 30s

INITIAL WELL DATA & WELL PURGING INFORMATION								More Info on Back? Yes/No	
Time (0:00 - 23:59)	DTW (feet TOC)	Temp. (C)	Dissolved Oxygen (mg/L)	Specific Conductivity (mS/cm)	pH	ORP (mV)	Turbidity visual/meas. (NTUs)	Volume Purged (gallons/liters)	
1123	32.65	10.1	1.68	0.066	6.11	57.4			
1126	32.84	10.1	1.68	0.054	6.08	53.6			
1129	33.07	10.1	1.91	0.053	6.02	53.3			
1134	32.95	10.1	2.13	0.054	6.00	52.3			
1137	32.91	10.0	2.50	0.055	5.97	51.9			
1140	32.86	10.0	2.85	0.056	5.96	51.5			
1145	32.81	10.0	3.31	0.058	5.96	49.4			
1148	32.82	10.1	3.45	0.059	5.96	49.1			
1151	32.83	10.0	3.57	0.060	5.98	47.8			
							0.35		
<b>Total Volume Purged</b>									<b>1.5</b>

Analytical Parameters	Number of bottles	Bottle size	Preserv.	Filtered? Y/N	Run? <input checked="" type="checkbox"/>	Notes
Explosives, Nitroglycerin, PETN, Picric Acid by 8330	2	1 L amber	none	N	<input type="checkbox"/>	
Perchlorates by EPA 6850	1	250 ml poly	none	Y	<input type="checkbox"/>	Fill w/~120 mL water
VOCs by 8260B	3	40 ml VOA	HCL	N	<input type="checkbox"/>	

Method of transportation of samples: Ship via FedEx to Anatek

Field Observations/Notes of Sampling Event:

Signature of Field Personnel: *Daniel Rutt* Date: 12-1-23



**NON-HAZARDOUS  
WASTE MANIFEST**

1. Generator ID Number  
NA

2. Page 1 of  
1

3. Emergency Response Phone  
(800) 859-4672

4. Waste Tracking Number  
P216.11945-01

5. Generator's Name and Mailing Address  
CLARK COUNTY  
4412 S CORBETT AVE  
PORTLAND, OR 97239

Generator's Site Address (if different than mailing address)  
23201 NE PLUSS RD  
VANCOUVER, WA 98661

Generator's Phone: (503) 417-7737

6. Transporter 1 Company Name  
NRC ENVIRONMENTAL SERVICES INC

U.S. EPA ID Number  
CAR 000 030 114

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address  
US ECOLOGY IDAHO, INC.  
20400 LEMLEY ROAD  
GRAND VIEW, ID 83624  
Facility's Phone: (800) 274-1516

U.S. EPA ID Number  
IDD 073 114 654

9. Waste Shipping Name and Description

10. Containers

11. Total  
Quantity

12. Unit  
Wt./Vol.

1. MATERIAL NOT REGULATED BY D.O.T., (MONITORING  
WELL PURGE WATER)

No. 004

Type DM

00200

15

2.

3.

4.

13. Special Handling Instructions and Additional Information

1. 4X55GDH Profile# 65849-0  
Job # P216 11945 [W:66.50.161500] PM: SC

PM STEVEN

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name  
David Rukki On behalf of Clark County

Signature  
*David Rukki*

Month Day Year  
11 21 03

15. International Shipments  Import to U.S.  Export from U.S.

Port of entry/exit:

Transporter Signature (for exports only):

Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name

Signature  
*Jacob Keller*

Month Day Year  
11 21 03

Transporter 2 Printed/Typed Name

Signature

Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space  Quantity  Type  Residue  Partial Rejection  Full Rejection

17b. Alternate Facility (or Generator)

Manifest Reference Number:

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name  
Brenda Cordova

Signature  
*Brenda Cordova*

Month Day Year  
12 6 23

# Appendix C

## Historical Data





Appendix C. Historical Groundwater Results at LC-MW01D

Sample Date	Explosives																	Perchlorate	VOCs					
	1,3,5-Trinitrobenzene	1,3-Dinitrobenzene	2,4,6-Trinitrotoluene	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Amino-4,6-dinitrotoluene	2-Nitrotoluene	3-Nitrotoluene	4-Amino-2,6-dinitrotoluene	4-Nitrotoluene	HMX	Nitrobenzene	Nitroglycerin	PETN	Picric Acid	RDX	Tetryl	Perchlorate	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene
	µg/L																							
6/1/2020	< 0.1	< 0.1	< 0.2	< 0.1	< 0.2	< 0.2	< 0.3	< 0.3	< 0.2	< 0.3	< 0.1	< 0.1	--	--	--	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
9/22/2020	< 0.1	< 0.1	< 0.2	< 0.1	< 0.2	< 0.2	< 0.3	< 0.3	< 0.2	< 0.3	< 0.1	< 0.1	--	--	--	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
6/14/2021	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
9/27/2022	< 0.5	< 0.5	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
12/13/2022	< 0.5	< 0.5	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
3/15/2023	< 0.5	< 0.5	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
5/23/2023	< 0.5	< 0.5	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
8/29/2023	< 0.5	< 0.5	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.5	--	--	--	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
11/27/2023	< 0.5	< 0.5	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.5	--	--	--	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5





Appendix C. Historical Groundwater Results at LC-MW01D

	VOCs																										
	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dinitrophenol	2-Chlorotoluene	2-Hexanone	3,3'-Dichlorobenzidine	4,6-Dinitro-2-methylphenol	4-Chlorotoluene	4-Methyl-2-Pentanone (MIBK)	4-Nitrophenol	Acetone	Acrylonitrile
Sample Date	µg/L																										
6/1/2020	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 2.5	--	--	< 0.5	< 2.5	--	< 2.5	< 0.5
9/22/2020	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 2.5	--	--	< 0.5	< 2.5	--	< 2.5	< 0.5
6/14/2021	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 2.5	--	--	< 0.5	< 2.5	--	< 2.5	< 0.5
9/27/2022	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 2.5	--	--	< 0.5	< 2.5	--	< 2.5	< 0.5
12/13/2022	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 2.5	< 0.5	< 0.5	< 0.5	< 2.5	< 0.5	< 2.5	< 0.5
3/15/2023	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 2.5	--	--	< 0.5	< 2.5	--	< 2.5	< 0.5
5/23/2023	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 2.5	--	--	< 0.5	< 2.5	--	< 2.5	< 0.5
8/29/2023	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 2.5	--	--	< 0.5	< 2.5	--	< 2.5	< 0.5
11/27/2023	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 2.5	< 0.5	< 0.5	< 0.5	< 2.5	< 0.5	< 2.5	< 0.5





Appendix C. Historical Groundwater Results at LC-MW01D

		VOCs																											
		Azobenzene	Benzene	Benzidine	Bis(2-Chloroethyl)ether	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Carbon Disulfide	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	Ethylbenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Isophorone	Isopropylbenzene	m,p-Xylene	
Sample Date		µg/L																											
6/1/2020	--	< 0.5	--	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	--	
9/22/2020	--	< 0.5	--	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	--	
6/14/2021	--	< 0.5	--	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	--	
9/27/2022	--	< 0.5	--	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	--	
12/13/2022	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--
3/15/2023	--	< 0.5	--	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	--	
5/23/2023	--	< 0.5	--	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	--	
8/29/2023	--	< 0.5	--	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	--	
11/27/2023	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--





Appendix C. Historical Groundwater Results at LC-MW01D

VOCs																										
	m,p-Xylenes	Methyl ethyl ketone	Methyl tert-Butyl Ether	Methylene Chloride	Naphthalene	n-Butylbenzene	N-nitrosodimethylamine	n-Propylbenzene	o-Xylene	Pentachlorophenol	Phenol	p-Isopropyltoluene	Pyridine	sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl Chloride	Xylenes		
Sample Date	µg/L																									
6/1/2020	--	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5	--	< 0.5	< 0.5	--	--	< 0.5	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
9/22/2020	--	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5	--	< 0.5	< 0.5	--	--	< 0.5	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
6/14/2021	--	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5	--	< 0.5	< 0.5	--	--	< 0.5	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
9/27/2022	--	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5	--	< 0.5	< 0.5	--	--	< 0.5	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
12/13/2022	--	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
3/15/2023	--	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5	--	< 0.5	< 0.5	--	--	< 0.5	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
5/23/2023	--	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5	--	< 0.5	< 0.5	--	--	< 0.5	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
8/29/2023	--	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5	--	< 0.5	< 0.5	--	--	< 0.5	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
11/27/2023	--	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	





Appendix C. Historical Groundwater Results at LC-MW01S

Sample Date	Explosives																	Perchlorate	VOCs						
	1,3,5-Trinitrobenzene	1,3-Dinitrobenzene	2,4,6-Trinitrotoluene	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Amino-4,6-dinitrotoluene	2-Nitrotoluene	3-Nitrotoluene	4-Amino-2,6-dinitrotoluene	4-Nitrotoluene	HMX	Nitrobenzene	Nitroglycerin	PETN	Picric Acid	RDX	Tetryl	Perchlorate	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	
	µg/L																								
9/22/2020	< 0.1	< 0.1	< 0.2	< 0.1	< 0.2	< 0.2	< 0.3	< 0.3	< 0.2	< 0.3	< 0.1	< 0.1	--	--	--	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
6/14/2021	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
9/27/2022	< 0.5	< 0.5	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
12/13/2022	< 0.5	< 0.5	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
3/15/2023	< 0.5	< 0.5	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
5/23/2023	< 0.5	< 0.5	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
8/29/2023	< 0.5	< 0.5	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.5	--	--	--	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
11/27/2023	< 0.5	< 0.5	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.5	--	--	--	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5





Appendix C. Historical Groundwater Results at LC-MW01S

		VOCs																										
		1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dinitrophenol	2-Chlorotoluene	2-Hexanone	3,3'-Dichlorobenzidine	4,6-Dinitro-2-methylphenol	4-Chlorotoluene	4-Methyl-2-Pentanone (MIBK)	4-Nitrophenol	Acetone	Acrylonitrile
Sample Date		µg/L																										
9/22/2020		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 2.5	--	--	< 0.5	< 2.5	--	< 2.5	< 0.5
6/14/2021		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 2.5	--	--	< 0.5	< 2.5	--	< 2.5	< 0.5
9/27/2022		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 2.5	--	--	< 0.5	< 2.5	--	< 2.5	< 0.5
12/13/2022		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 2.5	< 0.5	< 0.5	< 0.5	< 2.5	< 0.5	< 2.5	< 0.5
3/15/2023		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 2.5	--	--	< 0.5	< 2.5	--	< 2.5	< 0.5
5/23/2023		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 2.5	--	--	< 0.5	< 2.5	--	< 2.5	< 0.5
8/29/2023		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 2.5	--	--	< 0.5	< 2.5	--	< 2.5	< 0.5
11/27/2023		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 2.5	< 0.5	< 0.5	< 0.5	< 2.5	< 0.5	< 2.5	< 0.5





Appendix C. Historical Groundwater Results at LC-MW01S

Sample Date	VOCs																											
	Azobenzene	Benzene	Benzidine	Bis(2-Chloroethyl)ether	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Carbon Disulfide	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	Ethylbenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Isophorone	Isopropylbenzene	m,p-Xylene	
9/22/2020	--	< 0.5	--	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	--	
6/14/2021	--	< 0.5	--	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	--	
9/27/2022	--	< 0.5	--	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	--	
12/13/2022	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--
3/15/2023	--	< 0.5	--	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	--	
5/23/2023	--	< 0.5	--	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	--	
8/29/2023	--	< 0.5	--	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	--	
11/27/2023	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--





Appendix C. Historical Groundwater Results at LC-MW01S

Sample Date	VOCs																								
	m,p-Xylenes	Methyl ethyl ketone	Methyl tert-Butyl Ether	Methylene Chloride	Naphthalene	n-Butylbenzene	N-nitrosodimethylamine	n-Propylbenzene	o-Xylene	Pentachlorophenol	Phenol	p-Isopropyltoluene	Pyridine	sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl Chloride	Xylenes	
	µg/L																								
9/22/2020	--	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5	--	< 0.5	< 0.5	--	--	< 0.5	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
6/14/2021	--	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5	--	< 0.5	< 0.5	--	--	< 0.5	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
9/27/2022	--	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5	--	< 0.5	< 0.5	--	--	< 0.5	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
12/13/2022	--	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
3/15/2023	--	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5	--	< 0.5	< 0.5	--	--	< 0.5	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
5/23/2023	--	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5	--	< 0.5	< 0.5	--	--	< 0.5	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
8/29/2023	--	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5	--	< 0.5	< 0.5	--	--	< 0.5	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
11/27/2023	--	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5





Appendix C. Historical Groundwater Results at LC-MW02D

Sample Date	Explosives																Perchlorate	VOCs							
	1,3,5-Trinitrobenzene	1,3-Dinitrobenzene	2,4,6-Trinitrotoluene	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Amino-4,6-dinitrotoluene	2-Nitrotoluene	3-Nitrotoluene	4-Amino-2,6-dinitrotoluene	4-Nitrotoluene	HMX	Nitrobenzene	Nitroglycerin	PETN	Picric Acid	RDX	Tetryl	Perchlorate	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	
	µg/L																								
9/22/2020	< 0.1	< 0.1	< 0.2	< 0.1	< 0.2	< 0.2	< 0.3	< 0.3	< 0.2	< 0.3	< 0.1	< 0.1	--	--	--	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
6/14/2021	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
9/27/2022	< 0.5	< 0.5	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
12/13/2022	< 0.5	< 0.5	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
3/15/2023	< 0.5	< 0.5	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
5/23/2023	< 0.5	< 0.5	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
8/29/2023	< 0.5	< 0.5	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.5	--	--	--	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
11/28/2023	< 0.5	< 0.5	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.5	--	--	--	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	





**Appendix C. Historical Groundwater Results at LC-MW02D**

VOCs																											
Sample Date	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dinitrophenol	2-Chlorotoluene	2-Hexanone	3,3'-Dichlorobenzidine	4,6-Dinitro-2-methylphenol	4-Chlorotoluene	4-Methyl-2-Pentanone (MIBK)	4-Nitrophenol	Acetone	Acrylonitrile
	µg/L																										
9/22/2020	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 2.5	--	--	< 0.5	< 2.5	--	< 2.5	< 0.5
6/14/2021	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 2.5	--	--	< 0.5	< 2.5	--	< 2.5	< 0.5
9/27/2022	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 2.5	--	--	< 0.5	< 2.5	--	< 2.5	< 0.5
12/13/2022	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 2.5	< 0.5	< 0.5	< 0.5	< 2.5	< 0.5	< 2.5	< 0.5
3/15/2023	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 2.5	--	--	< 0.5	< 2.5	--	< 2.5	< 0.5
5/23/2023	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 2.5	--	--	< 0.5	< 2.5	--	< 2.5	< 0.5
8/29/2023	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 2.5	--	--	< 0.5	< 2.5	--	< 2.5	< 0.5
11/28/2023	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 2.5	< 0.5	< 0.5	< 0.5	< 2.5	< 0.5	< 2.5	< 0.5





Appendix C. Historical Groundwater Results at LC-MW02D

Sample Date	VOCs																											
	Azobenzene	Benzene	Benzidine	Bis(2-Chloroethyl)ether	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Carbon Disulfide	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	Ethylbenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Isophorone	Isopropylbenzene	m,p-Xylene	
	µg/L																											
9/22/2020	--	< 0.5	--	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	--	
6/14/2021	--	< 0.5	--	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	--	
9/27/2022	--	< 0.5	--	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	--	
12/13/2022	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	
3/15/2023	--	< 0.5	--	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	--
5/23/2023	--	< 0.5	--	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	--
8/29/2023	--	< 0.5	--	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	--
11/28/2023	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--





Appendix C. Historical Groundwater Results at LC-MW02D

		VOCs																									
		m,p-Xylenes	Methyl ethyl ketone	Methyl tert-Butyl Ether	Methylene Chloride	Naphthalene	n-Butylbenzene	N-nitrosodimethylamine	n-Propylbenzene	o-Xylene	Pentachlorophenol	Phenol	p-Isopropyltoluene	Pyridine	sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl Chloride	Xylenes		
Sample Date		µg/L																									
9/22/2020	--	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5	--	< 0.5	< 0.5	--	--	< 0.5	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
6/14/2021	--	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5	--	< 0.5	< 0.5	--	--	< 0.5	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
9/27/2022	--	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5	--	< 0.5	< 0.5	--	--	< 0.5	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
12/13/2022	--	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
3/15/2023	--	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5	--	< 0.5	< 0.5	--	--	< 0.5	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
5/23/2023	--	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5	--	< 0.5	< 0.5	--	--	< 0.5	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
8/29/2023	--	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5	--	< 0.5	< 0.5	--	--	< 0.5	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
11/28/2023	--	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5

Appendix C. Historical Groundwater Results at LC-MW02S

Sample Date	Explosives																	Perchlorate	VOCs				
	1,3,5-Trinitrobenzene	1,3-Dinitrobenzene	2,4,6-Trinitrotoluene	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Amino-4,6-dinitrotoluene	2-Nitrotoluene	3-Nitrotoluene	4-Amino-2,6-dinitrotoluene	4-Nitrotoluene	HMX	Nitrobenzene	Nitroglycerin	PETN	Picric Acid	RDX	Tetryl	Perchlorate	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane
LCMW02S	µg/L																						
12/10/2003	--	--	--	--	--	--	--	--	--	< 0.47	--	< 2.4	--	--	< 0.47	--	< 4	--	--	--	--	--	--
3/16/2004	--	--	--	--	--	--	--	--	--	< 0.49	--	< 2.5	--	--	< 0.49	--	< 4	--	--	--	--	--	--
6/15/2004	--	--	--	--	--	--	--	--	--	< 0.49	--	< 2.5	--	--	< 0.49	--	< 4	--	--	--	--	--	--
9/15/2004	--	--	--	--	--	--	--	--	--	< 0.49	--	< 2.5	--	--	< 0.49	--	< 1	--	--	--	--	--	--
12/8/2004	--	--	--	--	--	--	--	--	--	< 0.48	--	< 2.5	--	--	< 0.48	--	< 1	--	--	--	--	--	--
3/23/2005	--	--	--	--	--	--	--	--	--	< 0.48	--	< 2.5	--	--	< 0.48	--	< 1	--	--	--	--	--	--
6/24/2005	--	--	--	--	--	--	--	--	--	< 0.48	--	< 2.5	--	--	< 0.48	--	< 1	--	--	--	--	--	--
9/16/2005	--	--	--	--	--	--	--	--	--	< 0.48	--	< 2.5	--	--	< 0.48	--	< 1	--	< 1.0	--	--	--	< 1.0
1/27/2006	--	--	--	--	--	--	--	--	--	< 0.48	--	< 2.5	--	--	< 0.48	--	< 1	--	--	--	--	--	--
3/23/2006	--	--	--	--	--	--	--	--	--	< 0.48	--	< 2.5	--	--	< 0.48	--	< 1	--	--	--	--	--	--
3/21/2007	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 1.8	< 0.88	< 1	< 0.48	< 0.48	< 1	--	< 1	< 1	< 1	< 1	< 1
6/21/2007	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	--	< 0.48	< 2.5	--	< 1	--	< 0.48	< 1	--	< 1	< 1	< 1	< 1	< 1
9/17/2007	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 2.4	< 1.1	< 1	< 0.48	< 0.48	< 1	--	< 1	< 1	< 1	< 1	< 1
12/11/2007	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 2.4	< 1.1	< 1	< 0.48	< 0.48	< 1	--	< 1	< 1	< 1	< 1	< 1
1/17/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	--	--	--	--	--	--
3/18/2008	< 1	< 0.4	< 0.4	< 0.4	< 0.2	< 0.2	< 0.4	< 0.4	< 0.2	< 1	< 0.4	< 0.4	< 3	< 2	< 0.4	< 0.2	< 0.2	< 1	< 1	< 1	< 1	< 1	< 1
6/23/2008	< 1	< 0.4	< 0.4	< 0.4	< 0.2	< 0.2	< 0.4	< 0.4	< 0.2	< 1	< 0.4	< 0.4	< 3	< 2	< 0.4	< 0.2	< 0.2	< 1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
9/24/2008	< 1	< 0.4	< 0.4	< 0.4	< 0.2	< 0.2	< 0.4	< 0.4	< 0.2	< 1	< 0.4	< 0.4	< 3	< 2	< 0.4	< 0.2	< 0.2	< 1	< 1	< 1	< 1	< 1	< 1
1/12/2009	< 1	< 0.4	< 0.4	< 0.4	< 0.2	< 0.2	< 0.4	< 0.4	< 0.2	< 1	< 0.4	< 0.4	< 3	< 2	< 0.4	< 0.2	< 0.2	< 1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
3/23/2009	< 1	< 0.4	< 0.4	< 0.4	< 0.2	< 0.2	< 0.4	< 0.4	< 0.2	< 1	< 0.4	< 0.4	< 3	< 2	< 0.4	< 0.2	< 0.2	< 1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
6/25/2009	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.4	< 0.4	< 0.1	< 0.5	< 0.1	< 0.1	< 0.65	< 0.65	< 1	< 0.1	< 0.1	< 1	< 1	< 1	< 1	< 1	< 1
9/15/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1	< 1	< 1	< 1
12/14/2009	< 0.099	< 0.099	< 0.099	< 0.099	< 0.099	< 0.2	< 0.4	< 0.4	< 0.099	< 0.5	< 0.099	<b>0.077</b>	< 0.64	< 0.64	< 0.99	< 0.099	< 0.099	< 1	< 1	< 1	< 1	< 1	< 1
9/21/2010	< 0.099	< 0.099	< 0.099	< 0.099	< 0.099	< 0.2	< 0.4	< 0.4	< 0.099	< 0.5	< 0.099	< 0.099	< 0.64	< 0.64	< 0.99	< 0.099	< 0.099	< 1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
12/7/2010	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.22	< 0.43	< 0.43	< 0.11	< 0.54	< 0.11	< 0.11	< 0.7	< 0.7	< 1.1	< 0.11	< 0.11	< 1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
3/22/2011	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.41	< 0.41	< 0.1	< 0.51	< 0.1	< 0.1	< 0.66	< 0.66	< 1	< 0.1	< 0.1	< 1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
6/21/2011	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.4	< 0.4	< 0.1	< 0.5	< 0.1	< 0.1	< 0.66	< 0.66	< 1	< 0.1	< 0.1	< 1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
9/19/2011	< 0.099	< 0.099	< 0.099	< 0.099	< 0.099	< 0.2	< 0.4	< 0.4	< 0.099	< 0.5	< 0.099	< 0.099	< 0.64	< 0.64	< 0.99	< 0.099	< 0.099	< 1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
12/5/2011	< 0.099	< 0.099	< 0.099	< 0.099	< 0.099	< 0.2	< 0.4	< 0.4	< 0.099	< 0.5	< 0.099	< 0.099	< 0.64	< 0.64	< 0.99	< 0.099	< 0.099	< 1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
3/19/2012	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20	< 0.40	< 0.40	< 0.10	< 0.50	< 0.10	< 0.10	< 0.66	< 0.66	< 1.0	< 0.10	< 0.10	< 0.50	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
6/18/2012	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20	< 0.41	< 0.41	< 0.10	< 0.51	< 0.10	< 0.10	< 0.66	< 0.66	< 1.0	< 0.10	< 0.10	< 0.50	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0



Appendix C. Historical Groundwater Results at LC-MW02S

Sample Date	Explosives																	Perchlorate	VOCs				
	1,3,5-Trinitrobenzene	1,3-Dinitrobenzene	2,4,6-Trinitrotoluene	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Amino-4,6-dinitrotoluene	2-Nitrotoluene	3-Nitrotoluene	4-Amino-2,6-dinitrotoluene	4-Nitrotoluene	HMX	Nitrobenzene	Nitroglycerin	PETN	Picric Acid	RDX	Tetryl	Perchlorate	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane
	µg/L																						
9/22/2020	< 0.1	< 0.1	< 0.2	< 0.1	< 0.2	< 0.2	< 0.3	< 0.3	< 0.2	< 0.3	< 0.1	< 0.1	--	--	--	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
6/15/2021	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
9/27/2022	< 0.5	< 0.5	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
12/13/2022	< 0.5	< 0.5	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
3/15/2023	< 0.5	< 0.5	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
5/23/2023	< 0.5	< 0.5	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
8/29/2023	< 0.5	< 0.5	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.5	--	--	--	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
11/28/2023	< 0.5	< 0.5	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.5	--	--	--	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5





Appendix C. Historical Groundwater Results at LC-MW02S

VOCs																											
Sample Date	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dinitrophenol	2-Chlorotoluene	2-Hexanone	3,3'-Dichlorobenzidine	4,6-Dinitro-2-methylphenol	4-Chlorotoluene	4-Methyl-2-Pentanone (MIBK)	4-Nitrophenol	Acetone
	µg/L																										
9/22/2020	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 2.5	--	--	< 0.5	< 2.5	--	< 2.5
6/15/2021	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 2.5	--	--	< 0.5	< 2.5	--	< 2.5
9/27/2022	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 2.5	--	--	< 0.5	< 2.5	--	<b>2.92</b>
12/13/2022	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 2.5	< 0.5	< 0.5	< 0.5	< 2.5	< 0.5	< 2.5
3/15/2023	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 2.5	--	--	< 0.5	< 2.5	--	< 2.5
5/23/2023	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 2.5	--	--	< 0.5	< 2.5	--	< 2.5
8/29/2023	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 2.5	--	--	< 0.5	< 2.5	--	< 2.5
11/28/2023	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 2.5	< 0.5	< 0.5	< 0.5	< 2.5	< 0.5	< 2.5





Appendix C. Historical Groundwater Results at LC-MW02S

VOCs																												
	Acrylonitrile	Azobenzene	Benzene	Benzidine	Bis(2-Chloroethyl)ether	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Carbon Disulfide	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	Ethylbenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Isophorone	Isopropylbenzene	
Sample Date	µg/L																											
9/22/2020	< 0.5	--	< 0.5	--	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5
6/15/2021	< 0.5	--	< 0.5	--	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5
9/27/2022	< 0.5	--	< 0.5	--	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5
12/13/2022	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
3/15/2023	< 0.5	--	< 0.5	--	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5
5/23/2023	< 0.5	--	< 0.5	--	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5
8/29/2023	< 0.5	--	< 0.5	--	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5
11/28/2023	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5

Appendix C. Historical Groundwater Results at LC-MW02S

Sample Date	VOCs																								
	m,p-Xylene	m,p-Xylenes	Methyl ethyl ketone	Methyl tert-Butyl Ether	Methylene Chloride	Naphthalene	n-Butylbenzene	N-nitrosodimethylamine	n-Propylbenzene	o-Xylene	Pentachlorophenol	Phenol	p-Isopropyltoluene	Pyridine	sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl Chloride	Xylenes
LCMW02S																									
12/10/2003	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3/16/2004	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
9/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6/24/2005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
9/16/2005	--	--	< 5.0	--	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0	--	--	--	--	< 1.0	--	--
1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3/23/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3/21/2007	< 2	--	< 5	--	< 1	< 4.8	--	--	--	< 1	< 4.8	< 4.8	--	--	--	< 1	--	< 1	< 1	< 1	< 1	< 1	< 1	< 1	--
6/21/2007	< 2	--	< 5	--	< 1	< 4.7	--	--	--	< 1	< 4.7	< 4.7	--	--	--	< 1	--	< 1	< 1	< 1	< 1	< 1	< 1	< 1	--
9/17/2007	< 2	--	< 5	--	< 1	< 4.7	--	--	--	< 1	< 4.7	< 4.7	--	--	--	< 1	--	< 1	< 1	< 1	< 1	< 1	< 1	< 1	--
12/11/2007	< 2	--	< 5	--	< 1	< 4.7	--	--	--	< 1	< 4.7	< 4.7	--	--	--	< 1	--	< 1	< 1	< 1	< 1	< 1	< 1	< 1	--
1/17/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3/18/2008	< 2	--	< 10	< 1	< 5	< 2	< 5	--	< 1	< 1	< 9.52	< 4.76	< 2	--	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	--
6/23/2008	< 2.00	--	< 10.0	< 1.00	< 5.00	< 2.00	< 5.00	--	< 1.00	< 1.00	< 9.62	< 4.81	< 2.00	--	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	--
9/24/2008	< 2	--	< 10	< 1	< 5	< 2	< 5	--	< 1	< 1	< 9.52	< 4.76	< 2	--	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	--
1/12/2009	--	--	< 10.0	< 1.00	< 5.00	< 2.00	< 5.00	--	< 1.00	< 1.00	< 9.71	< 4.85	< 2.00	--	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 2.00
3/23/2009	--	--	< 10.0	< 1.00	< 5.00	< 2.00	< 5.00	--	< 1.00	< 1.00	--	--	< 2.00	--	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 2.00
6/25/2009	--	< 2	--	< 1	< 5	< 2	< 5	--	< 1	< 1	--	--	< 2	--	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	--
9/15/2009	--	< 2	--	< 1	< 1	< 1	< 1	--	< 1	< 1	--	--	< 1	--	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	--
12/14/2009	--	< 1	--	< 2	< 1	< 1	< 1	--	< 1	< 1	< 48	< 9.7	< 1	--	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	--
9/21/2010	--	--	< 10.0	< 1.00	< 5.00	< 0.0190	< 5.00	--	< 1.00	< 1.00	< 9.71	< 4.85	< 2.00	--	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 2.00
12/7/2010	--	--	< 10.0	< 1.00	< 5.00	< 2.00	< 5.00	--	< 1.00	< 1.00	--	--	< 2.00	--	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 2.00
3/22/2011	--	--	< 10.0	< 1.00	< 5.00	< 2.00	< 5.00	--	< 1.00	< 1.00	--	--	< 2.00	--	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 2.00
6/21/2011	--	--	< 10.0	< 1.00	< 5.00	< 2.00	< 5.00	--	< 1.00	< 1.00	--	--	< 2.00	--	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 2.00
9/19/2011	--	--	< 10.0	< 1.00	< 5.00	< 2.00	< 5.00	--	< 1.00	< 1.00	--	--	< 2.00	--	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 2.00
12/5/2011	--	--	< 10.0	< 1.00	< 5.00	< 0.0192	< 5.00	--	< 1.00	< 1.00	< 9.52	< 4.76	< 2.00	--	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 2.00
3/19/2012	--	--	< 10	< 1.0	< 5.0	< 5.0	< 5.0	--	< 1.0	< 1.0	--	--	< 2.0	--	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0
6/18/2012	--	--	< 10	< 1.0	< 5.0	< 5.0	< 5.0	--	< 1.0	< 1.0	--	--	< 2.0	--	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0



Appendix C. Historical Groundwater Results at LC-MW02S

Sample Date	VOCs																								
	m,p-Xylene	m,p-Xylenes	Methyl ethyl ketone	Methyl tert-Butyl Ether	Methylene Chloride	Naphthalene	n-Butylbenzene	N-nitrosodimethylamine	n-Propylbenzene	o-Xylene	Pentachlorophenol	Phenol	p-Isopropyltoluene	Pyridine	sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl Chloride	Xylenes
9/22/2020	--	--	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5	--	< 0.5	< 0.5	--	--	< 0.5	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
6/15/2021	--	--	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5	--	< 0.5	< 0.5	--	--	< 0.5	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
9/27/2022	--	--	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5	--	< 0.5	< 0.5	--	--	< 0.5	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
12/13/2022	--	--	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
3/15/2023	--	--	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5	--	< 0.5	< 0.5	--	--	< 0.5	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
5/23/2023	--	--	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5	--	< 0.5	< 0.5	--	--	< 0.5	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
8/29/2023	--	--	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5	--	< 0.5	< 0.5	--	--	< 0.5	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
11/28/2023	--	--	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5

Appendix C. Historical Groundwater Results at LC-MW03D

Sample Date	Explosives																Perchlorate	VOCs						
	1,3,5-Trinitrobenzene	1,3-Dinitrobenzene	2,4,6-Trinitrotoluene	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Amino-4,6-dinitrotoluene	2-Nitrotoluene	3-Nitrotoluene	4-Amino-2,6-dinitrotoluene	4-Nitrotoluene	HMX	Nitrobenzene	Nitroglycerin	PETN	Picric Acid	RDX	Tetryl	Perchlorate	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene
	µg/L																							
LCMW03D																								
12/16/2003	--	--	--	--	--	--	--	--	--	--	< 0.47	--	< 2.4	--	--	< 0.47	--	< 4	--	--	--	--	--	--
3/17/2004	--	--	--	--	--	--	--	--	--	--	< 0.49	--	< 2.5	--	--	< 0.49	--	< 4	--	--	--	--	--	--
6/16/2004	--	--	--	--	--	--	--	--	--	--	< 0.49	--	< 2.5	--	--	< 0.49	--	< 4	--	--	--	--	--	--
9/20/2004	--	--	--	--	--	--	--	--	--	--	< 0.49	--	< 2.5	--	--	< 0.49	--	< 1	--	--	--	--	--	--
12/3/2004	--	--	--	--	--	--	--	--	--	--	< 0.48	--	< 2.5	--	--	< 0.48	--	< 1	--	--	--	--	--	--
3/23/2005	--	--	--	--	--	--	--	--	--	--	< 0.48	--	< 2.5	--	--	< 0.48	--	< 1	--	--	--	--	--	--
6/28/2005	--	--	--	--	--	--	--	--	--	--	< 0.48	--	< 2.5	--	--	< 0.48	--	< 1	--	< 1.0	--	--	< 1.0	< 1.0
9/16/2005	--	--	--	--	--	--	--	--	--	--	< 0.48	--	< 2.5	--	--	< 0.48	--	< 1	--	--	--	--	--	--
1/26/2006	--	--	--	--	--	--	--	--	--	--	< 0.48	--	< 2.5	--	--	< 0.48	--	< 1	--	--	--	--	--	--
3/22/2006	--	--	--	--	--	--	--	--	--	--	< 0.48	--	< 2.5	--	--	< 0.48	--	< 1	--	< 1.0	--	--	< 1.0	< 1.0
3/21/2007	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 1.8	< 0.88	< 1	< 0.48	< 0.48	< 1	--	< 1	< 1	< 1	< 1	< 1
6/22/2007	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	--	< 0.48	< 2.5	--	< 1	--	< 0.48	< 1	--	< 1	< 1	< 1	< 1	< 1
9/19/2007	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 2.4	< 1.1	< 1	< 0.48	< 0.48	< 1	--	< 1	< 1	< 1	< 1	< 1
12/10/2007	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 2.4	< 1.1	< 1	< 0.48	< 0.48	< 1	--	< 1	< 1	< 1	< 1	< 1
3/17/2008	< 1	< 0.4	< 0.4	< 0.4	< 0.2	< 0.2	< 0.4	< 0.4	< 0.2	< 1	< 0.4	< 0.4	< 3	< 2	< 0.4	< 0.2	< 0.2	< 1	< 1	< 1	< 1	< 1	< 1	< 1
6/23/2008	< 1	< 0.4	< 0.4	< 0.4	< 0.2	< 0.2	< 0.4	< 0.4	< 0.2	< 1	< 0.4	< 0.4	< 3	< 2	< 0.4	< 0.2	< 0.2	< 1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
9/23/2008	< 1	< 0.4	< 0.4	< 0.4	< 0.2	< 0.2	< 0.4	< 0.4	< 0.2	< 1	< 0.4	< 0.4	< 3	< 2	< 0.4	< 0.2	< 0.2	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1/12/2009	< 1	< 0.4	< 0.4	< 0.4	< 0.2	< 0.2	< 0.4	< 0.4	< 0.2	< 1	< 0.4	< 0.4	< 3	< 2	< 0.4	< 0.2	< 0.2	< 1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
3/23/2009	< 1	< 0.4	< 0.4	< 0.4	< 0.2	< 0.2	< 0.4	< 0.4	< 0.2	< 1	< 0.4	< 0.4	< 3	< 2	< 0.4	< 0.2	< 0.2	< 1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
6/24/2009	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.4	< 0.4	< 0.1	< 0.5	< 0.1	< 0.1	< 0.66	< 0.66	< 1	< 0.1	< 0.1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
9/15/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1
12/15/2009	< 0.099	< 0.099	< 0.099	< 0.099	< 0.099	< 0.2	< 0.4	< 0.4	< 0.099	< 0.5	< 0.099	< 0.099	< 0.64	< 0.64	< 0.99	< 0.099	< 0.099	< 1	< 1	< 1	< 1	< 1	< 1	< 1
9/21/2010	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.4	< 0.4	< 0.1	< 0.5	< 0.1	< 0.1	< 0.65	< 0.65	< 1	< 0.1	< 0.1	< 1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
12/7/2010	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.22	< 0.43	< 0.43	< 0.11	< 0.54	< 0.11	< 0.11	< 0.7	< 0.7	< 1.1	< 0.11	< 0.11	< 1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
3/22/2011	< 0.099	< 0.099	< 0.099	< 0.099	< 0.099	< 0.2	< 0.4	< 0.4	< 0.099	< 0.5	< 0.099	< 0.099	< 0.64	< 0.64	< 0.99	< 0.099	< 0.099	< 1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
6/21/2011	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.4	< 0.4	< 0.1	< 0.5	< 0.1	< 0.1	< 0.65	< 0.65	< 1	< 0.1	< 0.1	< 1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
9/19/2011	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.4	< 0.4	< 0.1	< 0.5	< 0.1	< 0.1	< 0.65	< 0.65	< 1	< 0.1	< 0.1	< 1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
12/5/2011	< 0.099	< 0.099	< 0.099	< 0.099	< 0.099	< 0.2	< 0.4	< 0.4	< 0.099	< 0.5	< 0.099	< 0.099	< 0.64	< 0.64	< 0.99	< 0.099	< 0.099	< 1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
3/19/2012	< 0.099	< 0.099	< 0.099	< 0.099	< 0.099	< 0.20	< 0.40	< 0.40	< 0.099	< 0.50	< 0.099	< 0.099	< 0.64	< 0.64	< 0.99	< 0.099	< 0.099	< 0.50	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0
6/18/2012	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.21	< 0.41	< 0.41	< 0.10	< 0.52	< 0.10	< 0.10	< 0.67	< 0.67	< 1.0	< 0.10	< 0.10	< 0.50	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0
9/10/2012	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.21	< 0.42	< 0.42	< 0.10	< 0.52	< 0.10	< 0.10	< 0.68	< 0.68	< 1.0	< 0.10	< 0.10	< 0.50	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0



Appendix C. Historical Groundwater Results at LC-MW03D

Sample Date	Explosives																	Perchlorate	VOCs						
	1,3,5-Trinitrobenzene	1,3-Dinitrobenzene	2,4,6-Trinitrotoluene	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Amino-4,6-dinitrotoluene	2-Nitrotoluene	3-Nitrotoluene	4-Amino-2,6-dinitrotoluene	4-Nitrotoluene	HMX	Nitrobenzene	Nitroglycerin	PETN	Picric Acid	RDX	Tetryl	Perchlorate	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	
	µg/L																								
6/15/2021	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
9/28/2022	< 0.5	< 0.5	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
12/13/2022	< 0.5	< 0.5	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
3/15/2023	< 0.5	< 0.5	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
5/23/2023	< 0.5	< 0.5	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
8/29/2023	< 0.5	< 0.5	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.5	--	--	--	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
11/28/2023	< 0.5	< 0.5	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.5	--	--	--	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5





Appendix C. Historical Groundwater Results at LC-MW03D

VOCs																											
Sample Date	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dinitrophenol	2-Chlorotoluene	2-Hexanone	3,3'-Dichlorobenzidine	4,6-Dinitro-2-methylphenol	4-Chlorotoluene	4-Methyl-2-Pentanone (MIBK)	4-Nitrophenol	Acetone	Acrylonitrile
	µg/L																										
6/15/2021	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 2.5	--	--	< 0.5	< 2.5	--	< 2.5	< 0.5
9/28/2022	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 2.5	--	--	< 0.5	< 2.5	--	< 2.5	< 0.5
12/13/2022	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 2.5	< 0.5	< 0.5	< 0.5	< 2.5	< 0.5	< 2.5	< 0.5
3/15/2023	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 2.5	--	--	< 0.5	< 2.5	--	< 2.5	< 0.5
5/23/2023	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 2.5	--	--	< 0.5	< 2.5	--	< 2.5	< 0.5
8/29/2023	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 2.5	--	--	< 0.5	< 2.5	--	< 2.5	< 0.5
11/28/2023	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 2.5	< 0.5	< 0.5	< 0.5	< 2.5	< 0.5	< 2.5	< 0.5





Appendix C. Historical Groundwater Results at LC-MW03D

		VOCs																										
		Azobenzene	Benzene	Benzidine	Bis(2-Chloroethyl)ether	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Carbon Disulfide	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	Ethylbenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Isophorone	Isopropylbenzene	m,p-Xylene
Sample Date		µg/L																										
6/15/2021	--	< 0.5	--	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	--
9/28/2022	--	< 0.5	--	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	--
12/13/2022	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--
3/15/2023	--	< 0.5	--	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	--
5/23/2023	--	< 0.5	--	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	--
8/29/2023	--	< 0.5	--	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	--
11/28/2023	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--





Appendix C. Historical Groundwater Results at LC-MW03D

Sample Date	VOCs																								
	m,p-Xylenes	Methyl ethyl ketone	Methyl tert-Butyl Ether	Methylene Chloride	Naphthalene	n-Butylbenzene	N-nitrosodimethylamine	n-Propylbenzene	o-Xylene	Pentachlorophenol	Phenol	p-Isopropyltoluene	Pyridine	sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl Chloride	Xylenes	
	µg/L																								
6/15/2021	--	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5	--	< 0.5	< 0.5	--	--	< 0.5	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
9/28/2022	--	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5	--	< 0.5	< 0.5	--	--	< 0.5	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
12/13/2022	--	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
3/15/2023	--	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5	--	< 0.5	< 0.5	--	--	< 0.5	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
5/23/2023	--	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5	--	< 0.5	< 0.5	--	--	< 0.5	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
8/29/2023	--	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5	--	< 0.5	< 0.5	--	--	< 0.5	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
11/28/2023	--	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5





Appendix C. Historical Groundwater Results at LC-MW03S

Sample Date	Explosives																Perchlorate	VOCs								
	1,3,5-Trinitrobenzene	1,3-Dinitrobenzene	2,4,6-Trinitrotoluene	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Amino-4,6-dinitrotoluene	2-Nitrotoluene	3-Nitrotoluene	4-Amino-2,6-dinitrotoluene	4-Nitrotoluene	HMX	Nitrobenzene	Nitroglycerin	PETN	Picric Acid	RDX	Tetryl	Perchlorate	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	
	µg/L																									
9/22/2020	< 0.1	< 0.1	< 0.2	< 0.1	< 0.2	< 0.2	< 0.3	< 0.3	< 0.2	< 0.3	< 0.1	< 0.1	--	--	--	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
6/15/2021	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
9/27/2022	< 0.5	< 0.5	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
12/13/2022	< 0.5	< 0.5	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
3/15/2023	< 0.5	< 0.5	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
5/23/2023	< 0.5	< 0.5	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
8/29/2023	< 0.5	< 0.5	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.5	--	--	--	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
11/28/2023	< 0.5	< 0.5	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.5	--	--	--	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5





Appendix C. Historical Groundwater Results at LC-MW03S

VOCs																											
	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dinitrophenol	2-Chlorotoluene	2-Hexanone	3,3'-Dichlorobenzidine	4,6-Dinitro-2-methylphenol	4-Chlorotoluene	4-Methyl-2-Pentanone (MIBK)	4-Nitrophenol	Acetone	Acrylonitrile	Azobenzene
Sample Date	µg/L																										
9/22/2020	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 2.5	--	--	< 0.5	< 2.5	--	< 2.5	< 0.5	--
6/15/2021	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 2.5	--	--	< 0.5	< 2.5	--	< 2.5	< 0.5	--
9/27/2022	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 2.5	--	--	< 0.5	< 2.5	--	< 2.5	< 0.5	--
12/13/2022	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 2.5	< 0.5	< 0.5	< 0.5	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5
3/15/2023	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 2.5	--	--	< 0.5	< 2.5	--	< 2.5	< 0.5	--
5/23/2023	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 2.5	--	--	< 0.5	< 2.5	--	< 2.5	< 0.5	--
8/29/2023	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	< 2.5	--	--	< 0.5	< 2.5	--	< 2.5	< 0.5	--
11/28/2023	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 2.5	< 0.5	< 0.5	< 0.5	< 2.5	< 0.5	< 2.5	< 0.5	< 0.5



































































































































































































































































































































































































































































































































































































































# Anatek Labs, Inc.

1282 Alturas Drive - Moscow, ID 83843 - (208) 883-2839 - email moscow@anateklabs.com  
504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

Sample Location: 04Q23L4MW17W  
Lab/Sample Number: MDK0735-03      Collect Date: 11/29/23 10:20  
Date Received: 11/29/23 13:04      Collected By: D.Rukki, R.Martin  
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Volatiles (Continued)</b>							
Bromochloromethane	ND	ug/L	0.500	12/4/23 17:53	BKP	EPA 8260D	
Bromodichloromethane	ND	ug/L	0.500	12/4/23 17:53	BKP	EPA 8260D	
Bromoform	ND	ug/L	0.500	12/4/23 17:53	BKP	EPA 8260D	
Bromomethane	ND	ug/L	0.500	12/4/23 17:53	BKP	EPA 8260D	
Carbon disulfide	ND	ug/L	0.500	12/4/23 17:53	BKP	EPA 8260D	
Carbon Tetrachloride	ND	ug/L	0.500	12/4/23 17:53	BKP	EPA 8260D	
Chlorobenzene	ND	ug/L	0.500	12/4/23 17:53	BKP	EPA 8260D	
Chloroethane	ND	ug/L	0.500	12/4/23 17:53	BKP	EPA 8260D	
Chloroform	ND	ug/L	0.500	12/4/23 17:53	BKP	EPA 8260D	
Chloromethane	ND	ug/L	0.500	12/4/23 17:53	BKP	EPA 8260D	
cis-1,2-dichloroethene	ND	ug/L	0.500	12/4/23 17:53	BKP	EPA 8260D	
cis-1,3-Dichloropropene	ND	ug/L	0.500	12/4/23 17:53	BKP	EPA 8260D	
Dibromochloromethane	ND	ug/L	0.500	12/4/23 17:53	BKP	EPA 8260D	
Dibromomethane	ND	ug/L	0.500	12/4/23 17:53	BKP	EPA 8260D	
Dichlorodifluoromethane	ND	ug/L	0.500	12/4/23 17:53	BKP	EPA 8260D	
Ethylbenzene	ND	ug/L	0.500	12/4/23 17:53	BKP	EPA 8260D	
Hexachlorobutadiene	ND	ug/L	0.500	12/4/23 17:53	BKP	EPA 8260D	
Isopropylbenzene	ND	ug/L	0.500	12/4/23 17:53	BKP	EPA 8260D	
m+p-Xylene	ND	ug/L	0.500	12/4/23 17:53	BKP	EPA 8260D	
Methyl ethyl ketone (MEK)	ND	ug/L	2.50	12/4/23 17:53	BKP	EPA 8260D	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.50	12/4/23 17:53	BKP	EPA 8260D	
Methylene chloride	ND	ug/L	2.50	12/4/23 17:53	BKP	EPA 8260D	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.500	12/4/23 17:53	BKP	EPA 8260D	
Naphthalene	ND	ug/L	0.500	12/4/23 17:53	BKP	EPA 8260D	
n-Butylbenzene	ND	ug/L	0.500	12/4/23 17:53	BKP	EPA 8260D	
n-Propylbenzene	ND	ug/L	0.500	12/4/23 17:53	BKP	EPA 8260D	
o-Xylene	ND	ug/L	0.500	12/4/23 17:53	BKP	EPA 8260D	
p-isopropyltoluene	ND	ug/L	0.500	12/4/23 17:53	BKP	EPA 8260D	
sec-Butylbenzene	ND	ug/L	0.500	12/4/23 17:53	BKP	EPA 8260D	
Styrene	ND	ug/L	0.500	12/4/23 17:53	BKP	EPA 8260D	
tert-Butylbenzene	ND	ug/L	0.500	12/4/23 17:53	BKP	EPA 8260D	
Tetrachloroethene	ND	ug/L	0.500	12/4/23 17:53	BKP	EPA 8260D	
Toluene	ND	ug/L	0.500	12/4/23 17:53	BKP	EPA 8260D	
trans-1,2-Dichloroethene	ND	ug/L	0.500	12/4/23 17:53	BKP	EPA 8260D	
trans-1,3-Dichloropropene	ND	ug/L	0.500	12/4/23 17:53	BKP	EPA 8260D	
Trichloroethene	ND	ug/L	0.500	12/4/23 17:53	BKP	EPA 8260D	
Trichlorofluoromethane	ND	ug/L	0.500	12/4/23 17:53	BKP	EPA 8260D	
Vinyl Chloride	ND	ug/L	0.500	12/4/23 17:53	BKP	EPA 8260D	
<hr/>							
Surrogate: 1,2-Dichlorobenzene-d4	103%		70-130	12/4/23 17:53	BKP	EPA 8260D	
<hr/>							
Surrogate: 4-Bromofluorobenzene	98.4%		70-130	12/4/23 17:53	BKP	EPA 8260D	
<hr/>							
Surrogate: Toluene-d8	99.1%		70-130	12/4/23 17:53	BKP	EPA 8260D	

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1282 Alturas Drive - Moscow, ID 83843 - (208) 883-2839 - email moscow@anateklabs.com  
 504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

Sample Location: 04Q23L4MW18W  
 Lab/Sample Number: MDK0735-04 Collect Date: 11/29/23 11:15  
 Date Received: 11/29/23 13:04 Collected By: D.Rukki, R.Martin  
 Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Inorganics</b>							
Perchlorate	ND	ug/L	0.500	12/12/23 19:04	GPB	EPA 6850	
<b>Semivolatiles</b>							
1,3,5-TNB	ND	ug/L	0.500	12/27/23 6:22	MER	EPA 8330B	
1,3-Dinitrobenzene	ND	ug/L	0.500	12/27/23 6:22	MER	EPA 8330B	
2,4,6-Trinitrotoluene	ND	ug/L	0.100	12/27/23 6:22	MER	EPA 8330B	
2,4-Dinitrotoluene	ND	ug/L	0.100	12/27/23 6:22	MER	EPA 8330B	
2,6-DNT	ND	ug/L	0.500	12/27/23 6:22	MER	EPA 8330B	
2-Amino-4,6-dinitrotoluene	ND	ug/L	0.500	12/27/23 6:22	MER	EPA 8330B	
2-Nitrotoluene	ND	ug/L	0.500	12/27/23 6:22	MER	EPA 8330B	
3-Nitrotoluene	ND	ug/L	0.500	12/27/23 6:22	MER	EPA 8330B	
4-Amino-2,6-dinitrotoluene	ND	ug/L	0.500	12/27/23 6:22	MER	EPA 8330B	
4-Nitrotoluene	ND	ug/L	0.500	12/27/23 6:22	MER	EPA 8330B	
HMX	ND	ug/L	0.100	12/27/23 6:22	MER	EPA 8330B	
NB	ND	ug/L	0.500	12/27/23 6:22	MER	EPA 8330B	
RDX	ND	ug/L	0.100	12/27/23 6:22	MER	EPA 8330B	
Tetryl	ND	ug/L	0.500	12/27/23 6:22	MER	EPA 8330B	
<hr/>							
<i>Surrogate: 1,2-Dinitrobenzene</i>	<i>90.9%</i>		<i>70-130</i>	<i>12/27/23 6:22</i>	<i>MER</i>	<i>EPA 8330B</i>	
<b>Volatiles</b>							
1,1,1,2-Tetrachloroethane	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
1,1,1-Trichloroethane	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
1,1,2-Trichloroethane	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
1,1-Dichloroethane	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
1,1-Dichloroethene	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
1,1-dichloropropene	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
1,2,3-Trichlorobenzene	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
1,2,3-Trichloropropane	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
1,2,4-Trichlorobenzene	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
1,2,4-Trimethylbenzene	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
1,2-Dibromo-3-chloropropane (DBCP)	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
1,2-Dichlorobenzene	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
1,2-Dichloroethane	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
1,2-Dichloropropane	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
1,3,5-Trimethylbenzene	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
1,3-Dichlorobenzene	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
1,3-Dichloropropane	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
1,4-Dichlorobenzene	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
2,2-Dichloropropane	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
2-Chlorotoluene	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
2-hexanone	ND	ug/L	2.50	12/4/23 16:25	BKP	EPA 8260D	
4-Chlorotoluene	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
Acetone	ND	ug/L	2.50	12/4/23 16:25	BKP	EPA 8260D	
Acrylonitrile	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
Benzene	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
Bromobenzene	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	

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Sample Location: 04Q23L4MW18W  
Lab/Sample Number: MDK0735-04      Collect Date: 11/29/23 11:15  
Date Received: 11/29/23 13:04      Collected By: D.Rukki, R.Martin  
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Volatiles (Continued)</b>							
Bromochloromethane	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
Bromodichloromethane	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
Bromoform	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
Bromomethane	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
Carbon disulfide	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
Carbon Tetrachloride	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
Chlorobenzene	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
Chloroethane	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
Chloroform	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
Chloromethane	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
cis-1,2-dichloroethene	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
cis-1,3-Dichloropropene	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
Dibromochloromethane	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
Dibromomethane	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
Dichlorodifluoromethane	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
Ethylbenzene	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
Hexachlorobutadiene	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
Isopropylbenzene	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
m+p-Xylene	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
Methyl ethyl ketone (MEK)	ND	ug/L	2.50	12/4/23 16:25	BKP	EPA 8260D	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.50	12/4/23 16:25	BKP	EPA 8260D	
Methylene chloride	ND	ug/L	2.50	12/4/23 16:25	BKP	EPA 8260D	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
Naphthalene	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
n-Butylbenzene	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
n-Propylbenzene	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
o-Xylene	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
p-isopropyltoluene	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
sec-Butylbenzene	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
Styrene	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
tert-Butylbenzene	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
Tetrachloroethene	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
Toluene	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
trans-1,2-Dichloroethene	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
trans-1,3-Dichloropropene	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
Trichloroethene	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
Trichlorofluoromethane	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
Vinyl Chloride	ND	ug/L	0.500	12/4/23 16:25	BKP	EPA 8260D	
<hr/>							
Surrogate: 1,2-Dichlorobenzene-d4	102%		70-130	12/4/23 16:25	BKP	EPA 8260D	
<hr/>							
Surrogate: 4-Bromofluorobenzene	99.6%		70-130	12/4/23 16:25	BKP	EPA 8260D	
<hr/>							
Surrogate: Toluene-d8	99.4%		70-130	12/4/23 16:25	BKP	EPA 8260D	

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Sample Location: 04Q23L4MW07BW  
 Lab/Sample Number: MDK0735-05      Collect Date: 11/29/23 12:05  
 Date Received: 11/29/23 13:04      Collected By: D.Rukki, R.Martin  
 Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Inorganics</b>							
Perchlorate	1.24	ug/L	0.500	12/12/23 19:11	GPB	EPA 6850	
<b>Semivolatiles</b>							
1,3,5-TNB	ND	ug/L	0.500	12/27/23 6:59	MER	EPA 8330B	
1,3-Dinitrobenzene	ND	ug/L	0.500	12/27/23 6:59	MER	EPA 8330B	
2,4,6-Trinitrotoluene	ND	ug/L	0.100	12/27/23 6:59	MER	EPA 8330B	
2,4-Dinitrotoluene	ND	ug/L	0.100	12/27/23 6:59	MER	EPA 8330B	
2,6-DNT	ND	ug/L	0.500	12/27/23 6:59	MER	EPA 8330B	
2-Amino-4,6-dinitrotoluene	ND	ug/L	0.500	12/27/23 6:59	MER	EPA 8330B	
2-Nitrotoluene	ND	ug/L	0.500	12/27/23 6:59	MER	EPA 8330B	
3-Nitrotoluene	ND	ug/L	0.500	12/27/23 6:59	MER	EPA 8330B	
4-Amino-2,6-dinitrotoluene	ND	ug/L	0.500	12/27/23 6:59	MER	EPA 8330B	
4-Nitrotoluene	ND	ug/L	0.500	12/27/23 6:59	MER	EPA 8330B	
HMX	ND	ug/L	0.100	12/27/23 6:59	MER	EPA 8330B	
NB	ND	ug/L	0.500	12/27/23 6:59	MER	EPA 8330B	
RDX	ND	ug/L	0.100	12/27/23 6:59	MER	EPA 8330B	
Tetryl	ND	ug/L	0.500	12/27/23 6:59	MER	EPA 8330B	
<hr style="border-top: 1px dashed #000;"/>							
<i>Surrogate: 1,2-Dinitrobenzene</i>	<i>91.4%</i>		<i>70-130</i>	<i>12/27/23 6:59</i>	<i>MER</i>	<i>EPA 8330B</i>	
<b>Volatiles</b>							
1,1,1,2-Tetrachloroethane	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
1,1,1-Trichloroethane	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
1,1,2-Trichloroethane	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
1,1-Dichloroethane	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
1,1-Dichloroethene	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
1,1-dichloropropene	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
1,2,3-Trichlorobenzene	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
1,2,3-Trichloropropane	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
1,2,4-Trichlorobenzene	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
1,2,4-Trimethylbenzene	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
1,2-Dibromo-3-chloropropane (DBCP)	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
1,2-Dichlorobenzene	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
1,2-Dichloroethane	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
1,2-Dichloropropane	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
1,3,5-Trimethylbenzene	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
1,3-Dichlorobenzene	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
1,3-Dichloropropane	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
1,4-Dichlorobenzene	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
2,2-Dichloropropane	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
2-Chlorotoluene	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
2-hexanone	ND	ug/L	2.50	12/4/23 18:22	BKP	EPA 8260D	
4-Chlorotoluene	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
Acetone	ND	ug/L	2.50	12/4/23 18:22	BKP	EPA 8260D	
Acrylonitrile	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
Benzene	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
Bromobenzene	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	

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Sample Location: 04Q23L4MW07BW  
 Lab/Sample Number: MDK0735-05 Collect Date: 11/29/23 12:05  
 Date Received: 11/29/23 13:04 Collected By: D.Rukki, R.Martin  
 Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Volatiles (Continued)</b>							
Bromochloromethane	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
Bromodichloromethane	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
Bromoform	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
Bromomethane	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
Carbon disulfide	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
Carbon Tetrachloride	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
Chlorobenzene	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
Chloroethane	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
Chloroform	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
Chloromethane	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
cis-1,2-dichloroethene	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
cis-1,3-Dichloropropene	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
Dibromochloromethane	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
Dibromomethane	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
Dichlorodifluoromethane	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
Ethylbenzene	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
Hexachlorobutadiene	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
Isopropylbenzene	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
m+p-Xylene	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
Methyl ethyl ketone (MEK)	ND	ug/L	2.50	12/4/23 18:22	BKP	EPA 8260D	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.50	12/4/23 18:22	BKP	EPA 8260D	
Methylene chloride	ND	ug/L	2.50	12/4/23 18:22	BKP	EPA 8260D	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
Naphthalene	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
n-Butylbenzene	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
n-Propylbenzene	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
o-Xylene	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
p-isopropyltoluene	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
sec-Butylbenzene	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
Styrene	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
tert-Butylbenzene	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
Tetrachloroethene	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
Toluene	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
trans-1,2-Dichloroethene	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
trans-1,3-Dichloropropene	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
Trichloroethene	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
Trichlorofluoromethane	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
Vinyl Chloride	ND	ug/L	0.500	12/4/23 18:22	BKP	EPA 8260D	
<hr/>							
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>103%</i>		<i>70-130</i>	<i>12/4/23 18:22</i>	<i>BKP</i>	<i>EPA 8260D</i>	
<hr/>							
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98.9%</i>		<i>70-130</i>	<i>12/4/23 18:22</i>	<i>BKP</i>	<i>EPA 8260D</i>	
<hr/>							
<i>Surrogate: Toluene-d8</i>	<i>99.6%</i>		<i>70-130</i>	<i>12/4/23 18:22</i>	<i>BKP</i>	<i>EPA 8260D</i>	

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Sample Location: 04Q23L4MW01AW  
Lab/Sample Number: MDK0735-06 Collect Date: 11/29/23 13:10  
Date Received: 11/29/23 13:04 Collected By: D.Rukki, R.Martin  
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Inorganics</b>							
Perchlorate	1.41	ug/L	0.500	12/12/23 19:18	GPB	EPA 6850	
<b>Semivolatiles</b>							
1,3,5-TNB	ND	ug/L	0.500	12/27/23 8:14	MER	EPA 8330B	
1,3-Dinitrobenzene	ND	ug/L	0.500	12/27/23 8:14	MER	EPA 8330B	
2,4,6-Trinitrotoluene	ND	ug/L	0.100	12/27/23 8:14	MER	EPA 8330B	
2,4-Dinitrotoluene	ND	ug/L	0.100	12/27/23 8:14	MER	EPA 8330B	
2,6-DNT	ND	ug/L	0.500	12/27/23 8:14	MER	EPA 8330B	
2-Amino-4,6-dinitrotoluene	ND	ug/L	0.500	12/27/23 8:14	MER	EPA 8330B	
2-Nitrotoluene	ND	ug/L	0.500	12/27/23 8:14	MER	EPA 8330B	
3-Nitrotoluene	ND	ug/L	0.500	12/27/23 8:14	MER	EPA 8330B	
4-Amino-2,6-dinitrotoluene	ND	ug/L	0.500	12/27/23 8:14	MER	EPA 8330B	
4-Nitrotoluene	ND	ug/L	0.500	12/27/23 8:14	MER	EPA 8330B	
HMX	ND	ug/L	0.100	12/27/23 8:14	MER	EPA 8330B	
NB	ND	ug/L	0.500	12/27/23 8:14	MER	EPA 8330B	
RDX	ND	ug/L	0.100	12/27/23 8:14	MER	EPA 8330B	
Tetryl	ND	ug/L	0.500	12/27/23 8:14	MER	EPA 8330B	
<i>Surrogate: 1,2-Dinitrobenzene</i>	<i>92.1%</i>		<i>70-130</i>	<i>12/27/23 8:14</i>	<i>MER</i>	<i>EPA 8330B</i>	
<b>Volatiles</b>							
1,1,1,2-Tetrachloroethane	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
1,1,1-Trichloroethane	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
1,1,2-Trichloroethane	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
1,1-Dichloroethane	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
1,1-Dichloroethene	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
1,1-dichloropropene	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
1,2,3-Trichlorobenzene	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
1,2,3-Trichloropropane	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
1,2,4-Trichlorobenzene	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
1,2,4-Trimethylbenzene	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
1,2-Dibromo-3-chloropropane (DBCP)	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
1,2-Dichlorobenzene	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
1,2-Dichloroethane	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
1,2-Dichloropropane	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
1,3,5-Trimethylbenzene	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
1,3-Dichlorobenzene	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
1,3-Dichloropropane	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
1,4-Dichlorobenzene	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
2,2-Dichloropropane	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
2-Chlorotoluene	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
2-hexanone	ND	ug/L	2.50	12/4/23 18:51	BKP	EPA 8260D	
4-Chlorotoluene	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
Acetone	ND	ug/L	2.50	12/4/23 18:51	BKP	EPA 8260D	
Acrylonitrile	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
Benzene	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
Bromobenzene	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	

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Sample Location: 04Q23L4MW01AW  
Lab/Sample Number: MDK0735-06 Collect Date: 11/29/23 13:10  
Date Received: 11/29/23 13:04 Collected By: D.Rukki, R.Martin  
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Volatiles (Continued)</b>							
Bromochloromethane	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
Bromodichloromethane	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
Bromoform	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
Bromomethane	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
Carbon disulfide	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
Carbon Tetrachloride	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
Chlorobenzene	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
Chloroethane	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
Chloroform	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
Chloromethane	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
cis-1,2-dichloroethene	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
cis-1,3-Dichloropropene	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
Dibromochloromethane	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
Dibromomethane	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
Dichlorodifluoromethane	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
Ethylbenzene	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
Hexachlorobutadiene	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
Isopropylbenzene	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
m+p-Xylene	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
Methyl ethyl ketone (MEK)	ND	ug/L	2.50	12/4/23 18:51	BKP	EPA 8260D	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.50	12/4/23 18:51	BKP	EPA 8260D	
Methylene chloride	ND	ug/L	2.50	12/4/23 18:51	BKP	EPA 8260D	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
Naphthalene	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
n-Butylbenzene	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
n-Propylbenzene	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
o-Xylene	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
p-isopropyltoluene	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
sec-Butylbenzene	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
Styrene	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
tert-Butylbenzene	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
Tetrachloroethene	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
Toluene	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
trans-1,2-Dichloroethene	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
trans-1,3-Dichloropropene	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
Trichloroethene	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
Trichlorofluoromethane	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
Vinyl Chloride	ND	ug/L	0.500	12/4/23 18:51	BKP	EPA 8260D	
<hr/>							
Surrogate: 1,2-Dichlorobenzene-d4	102%		70-130	12/4/23 18:51	BKP	EPA 8260D	
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Surrogate: 4-Bromofluorobenzene	98.7%		70-130	12/4/23 18:51	BKP	EPA 8260D	
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Surrogate: Toluene-d8	99.6%		70-130	12/4/23 18:51	BKP	EPA 8260D	
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504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

Sample Location: 04Q23L4MW01BW  
Lab/Sample Number: MDK0735-07 Collect Date: 11/29/23 13:45  
Date Received: 11/29/23 13:04 Collected By: D.Rukki, R.Martin  
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Inorganics</b>							
Perchlorate	ND	ug/L	0.500	12/12/23 20:09	GPB	EPA 6850	
<b>Semivolatiles</b>							
1,3,5-TNB	ND	ug/L	0.500	12/27/23 8:52	MER	EPA 8330B	
1,3-Dinitrobenzene	ND	ug/L	0.500	12/27/23 8:52	MER	EPA 8330B	
2,4,6-Trinitrotoluene	ND	ug/L	0.100	12/27/23 8:52	MER	EPA 8330B	
2,4-Dinitrotoluene	ND	ug/L	0.100	12/27/23 8:52	MER	EPA 8330B	
2,6-DNT	ND	ug/L	0.500	12/27/23 8:52	MER	EPA 8330B	
2-Amino-4,6-dinitrotoluene	ND	ug/L	0.500	12/27/23 8:52	MER	EPA 8330B	
2-Nitrotoluene	ND	ug/L	0.500	12/27/23 8:52	MER	EPA 8330B	
3-Nitrotoluene	ND	ug/L	0.500	12/27/23 8:52	MER	EPA 8330B	
4-Amino-2,6-dinitrotoluene	ND	ug/L	0.500	12/27/23 8:52	MER	EPA 8330B	
4-Nitrotoluene	ND	ug/L	0.500	12/27/23 8:52	MER	EPA 8330B	
HMX	ND	ug/L	0.100	12/27/23 8:52	MER	EPA 8330B	
NB	ND	ug/L	0.500	12/27/23 8:52	MER	EPA 8330B	
RDX	ND	ug/L	0.100	12/27/23 8:52	MER	EPA 8330B	
Tetryl	ND	ug/L	0.500	12/27/23 8:52	MER	EPA 8330B	
<i>Surrogate: 1,2-Dinitrobenzene</i>	<i>92.2%</i>		<i>70-130</i>	<i>12/27/23 8:52</i>	<i>MER</i>	<i>EPA 8330B</i>	
<b>Volatiles</b>							
1,1,1,2-Tetrachloroethane	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
1,1,1-Trichloroethane	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
1,1,2-Trichloroethane	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
1,1-Dichloroethane	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
1,1-Dichloroethene	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
1,1-dichloropropene	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
1,2,3-Trichlorobenzene	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
1,2,3-Trichloropropane	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
1,2,4-Trichlorobenzene	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
1,2,4-Trimethylbenzene	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
1,2-Dibromo-3-chloropropane (DBCP)	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
1,2-Dichlorobenzene	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
1,2-Dichloroethane	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
1,2-Dichloropropane	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
1,3,5-Trimethylbenzene	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
1,3-Dichlorobenzene	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
1,3-Dichloropropane	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
1,4-Dichlorobenzene	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
2,2-Dichloropropane	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
2-Chlorotoluene	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
2-hexanone	ND	ug/L	2.50	12/4/23 19:20	BKP	EPA 8260D	
4-Chlorotoluene	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
Acetone	ND	ug/L	2.50	12/4/23 19:20	BKP	EPA 8260D	
Acrylonitrile	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
Benzene	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
Bromobenzene	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	

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1282 Alturas Drive - Moscow, ID 83843 - (208) 883-2839 - email [moscow@anateklabs.com](mailto:moscow@anateklabs.com)  
504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email [spokane@anateklabs.com](mailto:spokane@anateklabs.com)

Sample Location: 04Q23L4MW01BW  
Lab/Sample Number: MDK0735-07 Collect Date: 11/29/23 13:45  
Date Received: 11/29/23 13:04 Collected By: D.Rukki, R.Martin  
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Volatiles (Continued)</b>							
Bromochloromethane	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
Bromodichloromethane	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
Bromoform	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
Bromomethane	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
Carbon disulfide	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
Carbon Tetrachloride	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
Chlorobenzene	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
Chloroethane	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
Chloroform	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
Chloromethane	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
cis-1,2-dichloroethene	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
cis-1,3-Dichloropropene	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
Dibromochloromethane	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
Dibromomethane	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
Dichlorodifluoromethane	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
Ethylbenzene	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
Hexachlorobutadiene	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
Isopropylbenzene	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
m+p-Xylene	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
Methyl ethyl ketone (MEK)	ND	ug/L	2.50	12/4/23 19:20	BKP	EPA 8260D	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.50	12/4/23 19:20	BKP	EPA 8260D	
Methylene chloride	ND	ug/L	2.50	12/4/23 19:20	BKP	EPA 8260D	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
Naphthalene	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
n-Butylbenzene	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
n-Propylbenzene	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
o-Xylene	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
p-isopropyltoluene	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
sec-Butylbenzene	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
Styrene	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
tert-Butylbenzene	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
Tetrachloroethene	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
Toluene	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
trans-1,2-Dichloroethene	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
trans-1,3-Dichloropropene	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
Trichloroethene	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
Trichlorofluoromethane	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
Vinyl Chloride	ND	ug/L	0.500	12/4/23 19:20	BKP	EPA 8260D	
<hr/>							
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>103%</i>		<i>70-130</i>	<i>12/4/23 19:20</i>	<i>BKP</i>	<i>EPA 8260D</i>	
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<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98.6%</i>		<i>70-130</i>	<i>12/4/23 19:20</i>	<i>BKP</i>	<i>EPA 8260D</i>	
<hr/>							
<i>Surrogate: Toluene-d8</i>	<i>99.1%</i>		<i>70-130</i>	<i>12/4/23 19:20</i>	<i>BKP</i>	<i>EPA 8260D</i>	

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1282 Alturas Drive - Moscow, ID 83843 - (208) 883-2839 - email [moscow@anateklabs.com](mailto:moscow@anateklabs.com)  
504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email [spokane@anateklabs.com](mailto:spokane@anateklabs.com)

Sample Location: 04Q23L4MW04AW  
Lab/Sample Number: MDK0735-08 Collect Date: 11/29/23 14:30  
Date Received: 11/29/23 13:04 Collected By: D.Rukki, R.Martin  
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Inorganics</b>							
Perchlorate	68.0	ug/L	25.0	12/12/23 10:09	GPB	EPA 6850	
<b>Semivolatiles</b>							
1,3,5-TNB	ND	ug/L	0.500	12/27/23 9:29	MER	EPA 8330B	
1,3-Dinitrobenzene	ND	ug/L	0.500	12/27/23 9:29	MER	EPA 8330B	
2,4,6-Trinitrotoluene	ND	ug/L	0.100	12/27/23 9:29	MER	EPA 8330B	
2,4-Dinitrotoluene	ND	ug/L	0.100	12/27/23 9:29	MER	EPA 8330B	
2,6-DNT	ND	ug/L	0.500	12/27/23 9:29	MER	EPA 8330B	
2-Amino-4,6-dinitrotoluene	ND	ug/L	0.500	12/27/23 9:29	MER	EPA 8330B	
2-Nitrotoluene	ND	ug/L	0.500	12/27/23 9:29	MER	EPA 8330B	
3-Nitrotoluene	ND	ug/L	0.500	12/27/23 9:29	MER	EPA 8330B	
4-Amino-2,6-dinitrotoluene	ND	ug/L	0.500	12/27/23 9:29	MER	EPA 8330B	
4-Nitrotoluene	ND	ug/L	0.500	12/27/23 9:29	MER	EPA 8330B	
HMX	ND	ug/L	0.100	12/27/23 9:29	MER	EPA 8330B	
NB	ND	ug/L	0.500	12/27/23 9:29	MER	EPA 8330B	
RDX	7.37	ug/L	0.100	12/27/23 9:29	MER	EPA 8330B	
Tetryl	ND	ug/L	0.500	12/27/23 9:29	MER	EPA 8330B	
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Surrogate: 1,2-Dinitrobenzene	91.2%		70-130	12/27/23 9:29	MER	EPA 8330B	
<b>Volatiles</b>							
1,1,1,2-Tetrachloroethane	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
1,1,1-Trichloroethane	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
1,1,2-Trichloroethane	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
1,1-Dichloroethane	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
1,1-Dichloroethene	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
1,1-dichloropropene	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
1,2,3-Trichlorobenzene	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
1,2,3-Trichloropropane	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
1,2,4-Trichlorobenzene	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
1,2,4-Trimethylbenzene	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
1,2-Dibromo-3-chloropropane (DBCP)	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
1,2-Dichlorobenzene	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
1,2-Dichloroethane	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
1,2-Dichloropropane	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
1,3,5-Trimethylbenzene	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
1,3-Dichlorobenzene	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
1,3-Dichloropropane	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
1,4-Dichlorobenzene	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
2,2-Dichloropropane	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
2-Chlorotoluene	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
2-hexanone	ND	ug/L	2.50	12/4/23 19:50	BKP	EPA 8260D	
4-Chlorotoluene	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
Acetone	ND	ug/L	2.50	12/4/23 19:50	BKP	EPA 8260D	
Acrylonitrile	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
Benzene	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
Bromobenzene	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	

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1282 Alturas Drive - Moscow, ID 83843 - (208) 883-2839 - email moscow@anateklabs.com  
504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

Sample Location: 04Q23L4MW04AW  
Lab/Sample Number: MDK0735-08 Collect Date: 11/29/23 14:30  
Date Received: 11/29/23 13:04 Collected By: D.Rukki, R.Martin  
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Volatiles (Continued)</b>							
Bromochloromethane	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
Bromodichloromethane	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
Bromoform	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
Bromomethane	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
Carbon disulfide	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
Carbon Tetrachloride	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
Chlorobenzene	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
Chloroethane	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
Chloroform	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
Chloromethane	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
cis-1,2-dichloroethene	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
cis-1,3-Dichloropropene	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
Dibromochloromethane	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
Dibromomethane	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
Dichlorodifluoromethane	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
Ethylbenzene	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
Hexachlorobutadiene	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
Isopropylbenzene	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
m+p-Xylene	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
Methyl ethyl ketone (MEK)	ND	ug/L	2.50	12/4/23 19:50	BKP	EPA 8260D	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.50	12/4/23 19:50	BKP	EPA 8260D	
Methylene chloride	ND	ug/L	2.50	12/4/23 19:50	BKP	EPA 8260D	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
Naphthalene	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
n-Butylbenzene	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
n-Propylbenzene	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
o-Xylene	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
p-isopropyltoluene	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
sec-Butylbenzene	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
Styrene	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
tert-Butylbenzene	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
Tetrachloroethene	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
Toluene	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
trans-1,2-Dichloroethene	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
trans-1,3-Dichloropropene	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
Trichloroethene	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
Trichlorofluoromethane	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
Vinyl Chloride	ND	ug/L	0.500	12/4/23 19:50	BKP	EPA 8260D	
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Surrogate: 1,2-Dichlorobenzene-d4	103%		70-130	12/4/23 19:50	BKP	EPA 8260D	
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Surrogate: 4-Bromofluorobenzene	98.9%		70-130	12/4/23 19:50	BKP	EPA 8260D	
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Surrogate: Toluene-d8	99.8%		70-130	12/4/23 19:50	BKP	EPA 8260D	

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504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

Sample Location: 04Q23L4MW05AW  
Lab/Sample Number: MDK0735-09      Collect Date: 11/29/23 15:15  
Date Received: 11/29/23 13:04      Collected By: D.Rukki, R.Martin  
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Inorganics</b>							
Perchlorate	16.4	ug/L	0.500	12/12/23 20:24	GPB	EPA 6850	
<b>Semivolatiles</b>							
1,3,5-TNB	ND	ug/L	0.500	12/27/23 10:07	MER	EPA 8330B	
1,3-Dinitrobenzene	ND	ug/L	0.500	12/27/23 10:07	MER	EPA 8330B	
2,4,6-Trinitrotoluene	ND	ug/L	0.100	12/27/23 10:07	MER	EPA 8330B	
2,4-Dinitrotoluene	ND	ug/L	0.100	12/27/23 10:07	MER	EPA 8330B	
2,6-DNT	ND	ug/L	0.500	12/27/23 10:07	MER	EPA 8330B	
2-Amino-4,6-dinitrotoluene	ND	ug/L	0.500	12/27/23 10:07	MER	EPA 8330B	
2-Nitrotoluene	ND	ug/L	0.500	12/27/23 10:07	MER	EPA 8330B	
3-Nitrotoluene	ND	ug/L	0.500	12/27/23 10:07	MER	EPA 8330B	
4-Amino-2,6-dinitrotoluene	ND	ug/L	0.500	12/27/23 10:07	MER	EPA 8330B	
4-Nitrotoluene	ND	ug/L	0.500	12/27/23 10:07	MER	EPA 8330B	
HMX	ND	ug/L	0.100	12/27/23 10:07	MER	EPA 8330B	
NB	ND	ug/L	0.500	12/27/23 10:07	MER	EPA 8330B	
RDX	3.53	ug/L	0.100	12/27/23 10:07	MER	EPA 8330B	
Tetryl	ND	ug/L	0.500	12/27/23 10:07	MER	EPA 8330B	
<hr/>							
<i>Surrogate: 1,2-Dinitrobenzene</i>		<i>90.6%</i>		<i>12/27/23 10:07</i>		<i>MER EPA 8330B</i>	
<b>Volatiles</b>							
1,1,1,2-Tetrachloroethane	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
1,1,1-Trichloroethane	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
1,1,2-Trichloroethane	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
1,1-Dichloroethane	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
1,1-Dichloroethene	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
1,1-dichloropropene	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
1,2,3-Trichlorobenzene	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
1,2,3-Trichloropropane	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
1,2,4-Trichlorobenzene	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
1,2,4-Trimethylbenzene	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
1,2-Dibromo-3-chloropropane (DBCP)	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
1,2-Dichlorobenzene	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
1,2-Dichloroethane	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
1,2-Dichloropropane	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
1,3,5-Trimethylbenzene	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
1,3-Dichlorobenzene	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
1,3-Dichloropropane	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
1,4-Dichlorobenzene	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
2,2-Dichloropropane	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
2-Chlorotoluene	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
2-hexanone	ND	ug/L	2.50	12/4/23 20:19	BKP	EPA 8260D	
4-Chlorotoluene	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
Acetone	ND	ug/L	2.50	12/4/23 20:19	BKP	EPA 8260D	
Acrylonitrile	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
Benzene	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
Bromobenzene	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	

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Sample Location: 04Q23L4MW05AW  
Lab/Sample Number: MDK0735-09 Collect Date: 11/29/23 15:15  
Date Received: 11/29/23 13:04 Collected By: D.Rukki, R.Martin  
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Volatiles (Continued)</b>							
Bromochloromethane	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
Bromodichloromethane	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
Bromoform	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
Bromomethane	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
Carbon disulfide	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
Carbon Tetrachloride	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
Chlorobenzene	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
Chloroethane	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
Chloroform	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
Chloromethane	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
cis-1,2-dichloroethene	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
cis-1,3-Dichloropropene	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
Dibromochloromethane	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
Dibromomethane	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
Dichlorodifluoromethane	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
Ethylbenzene	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
Hexachlorobutadiene	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
Isopropylbenzene	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
m+p-Xylene	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
Methyl ethyl ketone (MEK)	ND	ug/L	2.50	12/4/23 20:19	BKP	EPA 8260D	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.50	12/4/23 20:19	BKP	EPA 8260D	
Methylene chloride	ND	ug/L	2.50	12/4/23 20:19	BKP	EPA 8260D	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
Naphthalene	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
n-Butylbenzene	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
n-Propylbenzene	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
o-Xylene	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
p-isopropyltoluene	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
sec-Butylbenzene	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
Styrene	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
tert-Butylbenzene	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
Tetrachloroethene	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
Toluene	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
trans-1,2-Dichloroethene	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
trans-1,3-Dichloropropene	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
Trichloroethene	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
Trichlorofluoromethane	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
Vinyl Chloride	ND	ug/L	0.500	12/4/23 20:19	BKP	EPA 8260D	
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<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	103%		70-130	12/4/23 20:19	BKP	EPA 8260D	
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<i>Surrogate: 4-Bromofluorobenzene</i>	97.9%		70-130	12/4/23 20:19	BKP	EPA 8260D	
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<i>Surrogate: Toluene-d8</i>	99.7%		70-130	12/4/23 20:19	BKP	EPA 8260D	
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 504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

Sample Location: 112923TB  
 Lab/Sample Number: MDK0735-10 Collect Date: 11/29/23 00:00  
 Date Received: 11/29/23 13:04 Collected By:  
 Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Volatiles</b>							
1,1,1,2-Tetrachloroethane	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
1,1,1-Trichloroethane	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
1,1,2-Trichloroethane	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
1,1-Dichloroethane	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
1,1-Dichloroethene	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
1,1-dichloropropene	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
1,2,3-Trichlorobenzene	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
1,2,3-Trichloropropane	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
1,2,4-Trichlorobenzene	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
1,2,4-Trimethylbenzene	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
1,2-Dibromo-3-chloropropane (DBCP)	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	ug/L	0.200	12/4/23 20:48	BKP	EPA 8260D	
1,2-Dichlorobenzene	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
1,2-Dichloroethane	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
1,2-Dichloropropane	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
1,3,5-Trimethylbenzene	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
1,3-Dichlorobenzene	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
1,3-Dichloropropane	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
1,4-Dichlorobenzene	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
2,2-Dichloropropane	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
2-Chloroethyl vinyl ether	ND	ug/L	2.50	12/4/23 20:48	BKP	EPA 8260D	
2-Chlorotoluene	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
2-hexanone	ND	ug/L	2.50	12/4/23 20:48	BKP	EPA 8260D	
4-Chlorotoluene	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
Acetone	ND	ug/L	2.50	12/4/23 20:48	BKP	EPA 8260D	
Acrolein	ND	ug/L	2.50	12/4/23 20:48	BKP	EPA 8260D	
Acrylonitrile	ND	ug/L	2.50	12/4/23 20:48	BKP	EPA 8260D	
Benzene	ND	ug/L	0.200	12/4/23 20:48	BKP	EPA 8260D	
Bromobenzene	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
Bromochloromethane	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
Bromodichloromethane	ND	ug/L	0.200	12/4/23 20:48	BKP	EPA 8260D	
Bromoform	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
Bromomethane	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
Carbon disulfide	ND	ug/L	2.50	12/4/23 20:48	BKP	EPA 8260D	
Carbon Tetrachloride	ND	ug/L	0.200	12/4/23 20:48	BKP	EPA 8260D	
Chlorobenzene	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
Chloroethane	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
Chloroform	ND	ug/L	0.200	12/4/23 20:48	BKP	EPA 8260D	
Chloromethane	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
cis-1,2-dichloroethene	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
cis-1,3-Dichloropropene	ND	ug/L	0.200	12/4/23 20:48	BKP	EPA 8260D	
Dibromochloromethane	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
Dibromomethane	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
Dichlorodifluoromethane	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
Ethylbenzene	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
Hexachlorobutadiene	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
Isopropylbenzene	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	

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Sample Location: 112923TB  
 Lab/Sample Number: MDK0735-10 Collect Date: 11/29/23 00:00  
 Date Received: 11/29/23 13:04 Collected By:  
 Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Volatiles (Continued)</b>							
m+p-Xylene	ND	ug/L	1.00	12/4/23 20:48	BKP	EPA 8260D	
Methyl ethyl ketone (MEK)	ND	ug/L	2.50	12/4/23 20:48	BKP	EPA 8260D	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.50	12/4/23 20:48	BKP	EPA 8260D	
Methylene chloride	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
Naphthalene	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
n-Butylbenzene	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
n-Propylbenzene	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
o-Xylene	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
p-isopropyltoluene	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
sec-Butylbenzene	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
Styrene	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
tert-Butylbenzene	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
Tetrachloroethene	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
Toluene	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
trans-1,2-Dichloroethene	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
trans-1,3-Dichloropropene	ND	ug/L	0.200	12/4/23 20:48	BKP	EPA 8260D	
trans-1-4-Dichloro-2-butene	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
Trichloroethene	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
Trichlorofluoromethane	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
Vinyl acetate	ND	ug/L	0.500	12/4/23 20:48	BKP	EPA 8260D	
Vinyl Chloride	ND	ug/L	0.200	12/4/23 20:48	BKP	EPA 8260D	
<hr/>							
Surrogate: 1,2-Dichlorobenzene-d4	104%		70-130	12/4/23 20:48	BKP	EPA 8260D	
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Surrogate: 4-Bromofluorobenzene	98.3%		70-130	12/4/23 20:48	BKP	EPA 8260D	
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Surrogate: Toluene-d8	98.6%		70-130	12/4/23 20:48	BKP	EPA 8260D	

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Authorized Signature,



Justin Doty For Todd Taruscio, Laboratory Manager

PQL	Practical Quantitation Limit
ND	Not Detected
MCL	EPA's Maximum Contaminant Level
Dry	Sample results reported on a dry weight basis
*	Not a state-certified analyte

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The results reported related only to the samples indicated.

# *Anatek Labs, Inc.*

1282 Alturas Drive - Moscow, ID 83843 - (208) 883-2839 - email moscow@anateklabs.com  
504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

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## **Certifications**

<b>Code</b>	<b>Description</b>	<b>Facility</b>	<b>Number</b>
DOE WA	Washington Department of Ecology	Anatek-Moscow, ID	C595

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## Quality Control Data

### Inorganics

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0321 - Perchlorate</b>										
<b>Blank (BDL0321-BLK1)</b>										
Perchlorate	ND		0.500	ug/L						
					Prepared: 12/8/2023 Analyzed: 12/11/2023					
<b>Blank (BDL0321-BLK2)</b>										
Perchlorate	ND		0.500	ug/L						
					Prepared: 12/8/2023 Analyzed: 12/12/2023					
<b>LCS (BDL0321-BS1)</b>										
Perchlorate	5.23		0.500	ug/L	5.00		105	80-120		
					Prepared: 12/8/2023 Analyzed: 12/11/2023					
<b>LCS (BDL0321-BS2)</b>										
Perchlorate	4.69		0.500	ug/L	5.00		93.8	80-120		
					Prepared: 12/8/2023 Analyzed: 12/12/2023					
<b>Matrix Spike (BDL0321-MS1)</b>										
Perchlorate	5.20		0.500	ug/L	5.00	ND	104	80-120		
					Prepared: 12/8/2023 Analyzed: 12/11/2023					
<b>Matrix Spike (BDL0321-MS2)</b>										
Perchlorate	324		25.0	ug/L	250	68.0	102	80-120		
					Prepared: 12/8/2023 Analyzed: 12/12/2023					
<b>Matrix Spike Dup (BDL0321-MSD1)</b>										
Perchlorate	5.35		0.500	ug/L	5.00	ND	107	80-120	2.84	20
					Prepared: 12/8/2023 Analyzed: 12/11/2023					
<b>Matrix Spike Dup (BDL0321-MSD2)</b>										
Perchlorate	319		25.0	ug/L	250	68.0	100	80-120	1.56	20
					Prepared: 12/8/2023 Analyzed: 12/12/2023					

## Quality Control Data

### Metals by ICP-MS

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0138 - ICP-MS</b>										
<b>Blank (BDL0138-BLK1)</b>										
Copper	ND		0.00100	mg/L						
Nickel	ND		0.00100	mg/L						
Silver	ND		0.00100	mg/L						
Chromium	ND		0.00100	mg/L						
Mercury	ND		0.000100	mg/L						
Antimony	ND		0.00100	mg/L						
Arsenic	ND		0.00100	mg/L						
Selenium	ND		0.00100	mg/L						
Lead	ND		0.00100	mg/L						
Thallium	ND		0.00100	mg/L						
Cadmium	ND		0.00100	mg/L						
					Prepared: 12/5/2023 Analyzed: 12/12/2023					
<b>LCS (BDL0138-BS1)</b>										
Arsenic	0.0518		0.00100	mg/L	0.0500		104	80-120		
Silver	0.0513		0.00100	mg/L	0.0500		103	75-125		
Mercury	0.00240		0.000100	mg/L	0.00250		96.0	80-120		
Cadmium	0.0520		0.00100	mg/L	0.0500		104	80-120		
Copper	0.0517		0.00100	mg/L	0.0500		103	80-120		
Nickel	0.0494		0.00100	mg/L	0.0500		98.8	80-120		
Chromium	0.0528		0.00100	mg/L	0.0500		106	80-120		

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## Quality Control Data (Continued)

### Metals by ICP-MS (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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### Batch: BDL0138 - ICP-MS (Continued)

#### LCS (BDL0138-BS1)

Prepared: 12/5/2023 Analyzed: 12/12/2023

Lead	0.0503		0.00100	mg/L	0.0500		101	80-120		
Antimony	0.0525		0.00100	mg/L	0.0500		105	80-120		
Selenium	0.0488		0.00100	mg/L	0.0500		97.5	80-120		
Thallium	0.0485		0.00100	mg/L	0.0500		97.0	80-120		

#### Matrix Spike (BDL0138-MS1)

Source: MDK0735-02

Prepared: 12/5/2023 Analyzed: 12/12/2023

Mercury	0.00257		0.000100	mg/L	0.00250	ND	103	75-125		
Lead	0.0504		0.00100	mg/L	0.0500	ND	101	75-125		
Copper	0.0513		0.00100	mg/L	0.0500	ND	103	75-125		
Antimony	0.0556		0.00100	mg/L	0.0500	ND	111	75-125		
Selenium	0.0522		0.00100	mg/L	0.0500	ND	104	75-125		
Thallium	0.0482		0.00100	mg/L	0.0500	ND	96.4	75-125		
Chromium	0.0532		0.00100	mg/L	0.0500	ND	106	75-125		
Nickel	0.0517		0.00100	mg/L	0.0500	ND	103	75-125		
Cadmium	0.0525		0.00100	mg/L	0.0500	ND	105	75-125		
Arsenic	0.0521		0.00100	mg/L	0.0500	0.000657	103	75-125		
Silver	0.0516		0.00100	mg/L	0.0500	ND	103	80-120		

#### Matrix Spike Dup (BDL0138-MSD1)

Source: MDK0735-02

Prepared: 12/5/2023 Analyzed: 12/12/2023

Mercury	0.00246		0.000100	mg/L	0.00250	ND	98.6	75-125	4.13	20
Selenium	0.0499		0.00100	mg/L	0.0500	ND	99.7	75-125	4.61	20
Cadmium	0.0524		0.00100	mg/L	0.0500	ND	105	75-125	0.177	20
Nickel	0.0505		0.00100	mg/L	0.0500	ND	101	75-125	2.22	20
Antimony	0.0540		0.00100	mg/L	0.0500	ND	108	75-125	2.95	20
Thallium	0.0484		0.00100	mg/L	0.0500	ND	96.9	75-125	0.544	20
Lead	0.0500		0.00100	mg/L	0.0500	ND	100	75-125	0.768	20
Copper	0.0523		0.00100	mg/L	0.0500	ND	105	75-125	1.80	20
Silver	0.0516		0.00100	mg/L	0.0500	ND	103	80-120	0.0659	20
Arsenic	0.0524		0.00100	mg/L	0.0500	0.000657	104	75-125	0.741	20
Chromium	0.0534		0.00100	mg/L	0.0500	ND	107	75-125	0.433	20

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## Quality Control Data (Continued)

### Metals by ICP-MS (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0549 - ICP-MS</b>										
<b>Blank (BDL0549-BLK1)</b>										
					Prepared: 12/13/2023 Analyzed: 12/14/2023					
Zinc	ND		0.00100	mg/L						
Beryllium	ND		0.00100	mg/L						
<b>LCS (BDL0549-BS1)</b>										
					Prepared: 12/13/2023 Analyzed: 12/14/2023					
Beryllium	0.0539		0.00100	mg/L	0.0500		108	80-120		
Zinc	0.0521		0.00100	mg/L	0.0500		104	80-120		
<b>Matrix Spike (BDL0549-MS1)</b>										
			<b>Source: MDK0735-02</b>		Prepared: 12/13/2023 Analyzed: 12/14/2023					
Zinc	0.0513		0.00100	mg/L	0.0500	ND	103	75-125		
Beryllium	0.0544		0.00100	mg/L	0.0500	ND	109	75-125		
<b>Matrix Spike Dup (BDL0549-MSD1)</b>										
			<b>Source: MDK0735-02</b>		Prepared: 12/13/2023 Analyzed: 12/14/2023					
Zinc	0.0550		0.00100	mg/L	0.0500	ND	110	75-125	6.97	20
Beryllium	0.0583		0.00100	mg/L	0.0500	ND	117	75-125	6.97	20

## Quality Control Data (Continued)

### Semivolatiles

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0072 - Explosives</b>										
<b>Blank (BDL0072-BLK1)</b>										
					Prepared: 12/4/2023 Analyzed: 12/26/2023					
HMX	ND		0.500	ug/L						
RDX	ND		0.500	ug/L						
1,3,5-TNB	ND		0.500	ug/L						
1,3-Dinitrobenzene	ND		0.500	ug/L						
NB	ND		0.500	ug/L						
2,4,6-Trinitrotoluene	ND		0.500	ug/L						
Tetryl	ND		0.500	ug/L						
2,6-DNT	ND		0.500	ug/L						
2,4-Dinitrotoluene	ND		0.500	ug/L						
2-Nitrotoluene	ND		0.500	ug/L						
4-Nitrotoluene	ND		0.500	ug/L						
4-Amino-2,6-dinitrotoluene	ND		0.500	ug/L						
3-Nitrotoluene	ND		0.500	ug/L						
2-Amino-4,6-dinitrotoluene	ND		0.500	ug/L						
<i>Surrogate: 1,2-Dinitrobenzene</i>			<i>9.80</i>	<i>ug/L</i>	<i>10.0</i>		<i>98.0</i>	<i>70-130</i>		
<b>Blank (BDL0072-BLK2)</b>										
					Prepared: 12/5/2023 Analyzed: 12/27/2023					
HMX	ND		0.500	ug/L						
RDX	ND		0.500	ug/L						
1,3,5-TNB	ND		0.500	ug/L						
1,3-Dinitrobenzene	ND		0.500	ug/L						
NB	ND		0.500	ug/L						
2,4,6-Trinitrotoluene	ND		0.500	ug/L						
Tetryl	ND		0.500	ug/L						
2,6-DNT	ND		0.500	ug/L						
2,4-Dinitrotoluene	ND		0.500	ug/L						
2-Nitrotoluene	ND		0.500	ug/L						

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## Quality Control Data (Continued)

### Semivolatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0072 - Explosives (Continued)</b>										
<b>Blank (BDL0072-BLK2)</b>			Prepared: 12/5/2023 Analyzed: 12/27/2023							
4-Nitrotoluene	ND		0.500	ug/L						
4-Amino-2,6-dinitrotoluene	ND		0.500	ug/L						
3-Nitrotoluene	ND		0.500	ug/L						
2-Amino-4,6-dinitrotoluene	ND		0.500	ug/L						
<i>Surrogate: 1,2-Dinitrobenzene</i>			<i>9.59</i>	<i>ug/L</i>	<i>10.0</i>		<i>95.9</i>	<i>70-130</i>		
<b>LCS (BDL0072-BS1)</b>										
			Prepared: 12/4/2023 Analyzed: 12/26/2023							
HMX	4.63		0.500	ug/L	5.00		92.6	70-130		
RDX	5.12		0.500	ug/L	5.00		102	70-130		
1,3,5-TNB	4.38		0.500	ug/L	5.00		87.7	70-130		
1,3-Dinitrobenzene	4.65		0.500	ug/L	5.00		93.0	70-130		
NB	4.75		0.500	ug/L	5.00		95.1	70-130		
2,4,6-Trinitrotoluene	4.59		0.500	ug/L	5.00		91.9	70-130		
Tetryl	4.34		0.500	ug/L	5.00		86.7	70-130		
2,6-DNT	4.42		0.500	ug/L	5.00		88.4	70-130		
2,4-Dinitrotoluene	4.53		0.500	ug/L	5.00		90.6	70-130		
2-Nitrotoluene	4.68		0.500	ug/L	5.00		93.5	70-130		
4-Nitrotoluene	4.52		0.500	ug/L	5.00		90.4	70-130		
4-Amino-2,6-dinitrotoluene	4.36		0.500	ug/L	5.00		87.3	70-130		
3-Nitrotoluene	4.54		0.500	ug/L	5.00		90.8	70-130		
2-Amino-4,6-dinitrotoluene	4.51		0.500	ug/L	5.00		90.2	70-130		
<i>Surrogate: 1,2-Dinitrobenzene</i>			<i>8.60</i>	<i>ug/L</i>	<i>10.0</i>		<i>86.0</i>	<i>70-130</i>		
<b>LCS (BDL0072-BS2)</b>										
			Prepared: 12/5/2023 Analyzed: 12/27/2023							
HMX	4.58		0.500	ug/L	5.00		91.6	70-130		
RDX	4.59		0.500	ug/L	5.00		91.8	70-130		
1,3,5-TNB	4.47		0.500	ug/L	5.00		89.4	70-130		
1,3-Dinitrobenzene	4.65		0.500	ug/L	5.00		92.9	70-130		
NB	4.76		0.500	ug/L	5.00		95.2	70-130		
2,4,6-Trinitrotoluene	4.50		0.500	ug/L	5.00		90.0	70-130		
Tetryl	4.36		0.500	ug/L	5.00		87.1	70-130		
2,6-DNT	4.40		0.500	ug/L	5.00		88.0	70-130		
2,4-Dinitrotoluene	4.52		0.500	ug/L	5.00		90.3	70-130		
2-Nitrotoluene	5.02		0.500	ug/L	5.00		100	70-130		
4-Nitrotoluene	4.59		0.500	ug/L	5.00		91.9	70-130		
4-Amino-2,6-dinitrotoluene	4.77		0.500	ug/L	5.00		95.4	70-130		
3-Nitrotoluene	4.01		0.500	ug/L	5.00		80.3	70-130		
2-Amino-4,6-dinitrotoluene	4.49		0.500	ug/L	5.00		89.7	70-130		
<i>Surrogate: 1,2-Dinitrobenzene</i>			<i>8.31</i>	<i>ug/L</i>	<i>10.0</i>		<i>83.1</i>	<i>70-130</i>		

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## Quality Control Data (Continued)

### Semivolatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0072 - Explosives (Continued)</b>										
<b>Matrix Spike (BDL0072-MS1)</b>		<b>Source: MDK0709-10</b>			Prepared: 12/4/2023 Analyzed: 12/26/2023					
HMX	4.31		0.500	ug/L	5.00	ND	86.1	70-130		
RDX	4.74		0.500	ug/L	5.00	ND	94.8	70-130		
1,3,5-TNB	4.13		0.500	ug/L	5.00	ND	82.6	70-130		
1,3-Dinitrobenzene	4.32		0.500	ug/L	5.00	ND	86.4	70-130		
NB	4.41		0.500	ug/L	5.00	ND	88.1	70-130		
2,4,6-Trinitrotoluene	4.27		0.500	ug/L	5.00	ND	85.5	70-130		
Tetryl	4.21		0.500	ug/L	5.00	ND	84.2	70-130		
2,6-DNT	4.56		0.500	ug/L	5.00	ND	91.2	70-130		
2,4-Dinitrotoluene	4.24		0.500	ug/L	5.00	ND	84.8	70-130		
2-Nitrotoluene	4.75		0.500	ug/L	5.00	ND	94.9	70-130		
4-Nitrotoluene	4.61		0.500	ug/L	5.00	ND	92.2	70-130		
4-Amino-2,6-dinitrotoluene	4.36		0.500	ug/L	5.00	ND	87.2	70-130		
3-Nitrotoluene	4.67		0.500	ug/L	5.00	ND	93.3	70-130		
2-Amino-4,6-dinitrotoluene	4.50		0.500	ug/L	5.00	ND	90.1	70-130		
<i>Surrogate: 1,2-Dinitrobenzene</i>			<i>8.56</i>	<i>ug/L</i>	<i>10.0</i>		<i>85.6</i>	<i>70-130</i>		
<hr/>										
<b>Matrix Spike (BDL0072-MS2)</b>		<b>Source: MDK0735-04</b>			Prepared: 12/4/2023 Analyzed: 12/27/2023					
HMX	4.62		0.500	ug/L	5.00	ND	92.3	70-130		
RDX	4.92		0.500	ug/L	5.00	ND	98.5	70-130		
1,3,5-TNB	4.46		0.500	ug/L	5.00	ND	89.3	70-130		
1,3-Dinitrobenzene	4.69		0.500	ug/L	5.00	ND	93.8	70-130		
NB	4.79		0.500	ug/L	5.00	ND	95.8	70-130		
2,4,6-Trinitrotoluene	4.57		0.500	ug/L	5.00	ND	91.4	70-130		
Tetryl	4.23		0.500	ug/L	5.00	ND	84.7	70-130		
2,6-DNT	4.42		0.500	ug/L	5.00	ND	88.4	70-130		
2,4-Dinitrotoluene	4.52		0.500	ug/L	5.00	ND	90.5	70-130		
2-Nitrotoluene	4.71		0.500	ug/L	5.00	ND	94.2	70-130		
4-Nitrotoluene	4.53		0.500	ug/L	5.00	ND	90.7	70-130		
4-Amino-2,6-dinitrotoluene	4.44		0.500	ug/L	5.00	ND	88.9	70-130		
3-Nitrotoluene	4.39		0.500	ug/L	5.00	ND	87.7	70-130		
2-Amino-4,6-dinitrotoluene	4.56		0.500	ug/L	5.00	ND	91.1	70-130		
<i>Surrogate: 1,2-Dinitrobenzene</i>			<i>8.73</i>	<i>ug/L</i>	<i>10.0</i>		<i>87.3</i>	<i>70-130</i>		

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## Quality Control Data (Continued)

### Semivolatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0072 - Explosives (Continued)</b>										
<b>Matrix Spike Dup (BDL0072-MSD1)</b>			<b>Source: MDK0709-10</b>		Prepared: 12/4/2023 Analyzed: 12/26/2023					
HMX	4.21		0.500	ug/L	5.00	ND	84.2	70-130	2.19	25
RDX	4.67		0.500	ug/L	5.00	ND	93.4	70-130	1.54	25
1,3,5-TNB	4.05		0.500	ug/L	5.00	ND	81.0	70-130	1.95	25
1,3-Dinitrobenzene	4.28		0.500	ug/L	5.00	ND	85.5	70-130	1.06	25
NB	4.33		0.500	ug/L	5.00	ND	86.5	70-130	1.83	25
2,4,6-Trinitrotoluene	4.20		0.500	ug/L	5.00	ND	84.1	70-130	1.63	25
Tetryl	4.20		0.500	ug/L	5.00	ND	84.1	70-130	0.140	25
2,6-DNT	4.50		0.500	ug/L	5.00	ND	90.0	70-130	1.36	25
2,4-Dinitrotoluene	4.17		0.500	ug/L	5.00	ND	83.5	70-130	1.50	25
2-Nitrotoluene	4.62		0.500	ug/L	5.00	ND	92.4	70-130	2.69	25
4-Nitrotoluene	4.56		0.500	ug/L	5.00	ND	91.1	70-130	1.15	25
4-Amino-2,6-dinitrotoluene	4.25		0.500	ug/L	5.00	ND	85.0	70-130	2.64	25
3-Nitrotoluene	4.59		0.500	ug/L	5.00	ND	91.7	70-130	1.77	25
2-Amino-4,6-dinitrotoluene	4.44		0.500	ug/L	5.00	ND	88.8	70-130	1.42	25
<i>Surrogate: 1,2-Dinitrobenzene</i>			<i>8.42</i>	<i>ug/L</i>	<i>10.0</i>		<i>84.2</i>	<i>70-130</i>		
<b>Matrix Spike Dup (BDL0072-MSD2)</b>										
<b>Source: MDK0735-04</b>			Prepared: 12/4/2023 Analyzed: 12/27/2023							
HMX	4.53		0.500	ug/L	5.00	ND	90.5	70-130	1.95	25
RDX	4.90		0.500	ug/L	5.00	ND	98.0	70-130	0.477	25
1,3,5-TNB	4.40		0.500	ug/L	5.00	ND	88.0	70-130	1.45	25
1,3-Dinitrobenzene	4.56		0.500	ug/L	5.00	ND	91.2	70-130	2.84	25
NB	4.67		0.500	ug/L	5.00	ND	93.3	70-130	2.59	25
2,4,6-Trinitrotoluene	4.53		0.500	ug/L	5.00	ND	90.6	70-130	0.928	25
Tetryl	4.23		0.500	ug/L	5.00	ND	84.6	70-130	0.0423	25
2,6-DNT	4.18		0.500	ug/L	5.00	ND	83.6	70-130	5.57	25
2,4-Dinitrotoluene	4.44		0.500	ug/L	5.00	ND	88.8	70-130	1.85	25
2-Nitrotoluene	4.63		0.500	ug/L	5.00	ND	92.7	70-130	1.60	25
4-Nitrotoluene	4.38		0.500	ug/L	5.00	ND	87.5	70-130	3.55	25
4-Amino-2,6-dinitrotoluene	4.31		0.500	ug/L	5.00	ND	86.3	70-130	2.97	25
3-Nitrotoluene	4.16		0.500	ug/L	5.00	ND	83.1	70-130	5.37	25
2-Amino-4,6-dinitrotoluene	4.30		0.500	ug/L	5.00	ND	86.1	70-130	5.73	25
<i>Surrogate: 1,2-Dinitrobenzene</i>			<i>8.18</i>	<i>ug/L</i>	<i>10.0</i>		<i>81.8</i>	<i>70-130</i>		

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504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

## Quality Control Data (Continued)

### Semivolatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0169 - SVOC Water</b>										
<b>Blank (BDL0169-BLK1)</b>										
Prepared: 12/4/2023 Analyzed: 12/17/2023										
2-Nitrophenol	ND		0.500	ug/L						
2,4-Dinitrophenol	ND		0.500	ug/L						
2,4-Dinitrotoluene	ND		0.500	ug/L						
2,6-Dinitrotoluene	ND		0.500	ug/L						
2-Chloronaphthalene	ND		0.500	ug/L						
2-Chlorophenol	ND		0.500	ug/L						
2-Methylnaphthalene	ND		0.500	ug/L						
2-Nitroaniline	ND		0.500	ug/L						
3+4-Methylphenol	ND		0.500	ug/L						
3,3'-Dichlorobenzidine	ND		0.500	ug/L						
3-Nitroaniline	ND		0.500	ug/L						
2,4-Dimethylphenol	ND		0.500	ug/L						
2-Methylphenol	ND		0.500	ug/L						
1,4-Dinitrobenzene	ND		0.500	ug/L						
Benzyl Butyl Phthalate	ND		0.500	ug/L						
4,6-Dinitro-2-methylphenol	ND		0.500	ug/L						
1,2,4-Trichlorobenzene	ND		0.500	ug/L						
1,2-Dinitrobenzene	ND		0.500	ug/L						
1,2-Diphenyl hydrazine	ND		0.500	ug/L						
m-Dichlorobenzene	ND		0.500	ug/L						
1,2-Dichlorobenzene (ortho-Dichlorobenzene)	ND		0.500	ug/L						
1,4-Dichlorobenzene (para-Dichlorobenzene)	ND		0.500	ug/L						
2,4-Dichlorophenol	ND		0.500	ug/L						
1-Methylnaphthalene	ND		0.500	ug/L						
2,3,4,6-Tetrachlorophenol	ND		0.500	ug/L						
2,3,5,6-Tetrachlorophenol	ND		0.500	ug/L						
2,4,5-Trichlorophenol	ND		0.500	ug/L						
2,4,6-Trichlorophenol	ND		0.500	ug/L						
1,3-Dinitrobenzene	ND		0.500	ug/L						
Di-n-butyl phthalate	ND		0.500	ug/L						
Di-n-octyl phthalate	ND		0.500	ug/L						
Fluoranthene	ND		0.500	ug/L						
Fluorene	ND		0.500	ug/L						
Hexachlorobenzene	ND		0.500	ug/L						
4-Bromophenyl-phenylether	ND		0.500	ug/L						
Hexachlorocyclopentadiene	ND		0.500	ug/L						
bis(2-Chloroethyl)ether	ND		0.500	ug/L						
Indeno(1,2,3-cd)pyrene	ND		0.500	ug/L						
Isophorone	ND		0.500	ug/L						
Dimethyl phthalate	ND		0.500	ug/L						
Nitrobenzene	ND		0.500	ug/L						
Hexachlorobutadiene	ND		0.500	ug/L						
n-Nitrosodimethylamine	ND		0.500	ug/L						
n-Nitroso-di-n-propylamine	ND		0.500	ug/L						
n-Nitrosodiphenylamine	ND		0.500	ug/L						
Pentachlorophenol	ND		0.500	ug/L						
Phenanthrene	ND		0.500	ug/L						
Phenol	ND		0.500	ug/L						
Pyrene	ND		0.500	ug/L						
Pyridine	ND		0.500	ug/L						

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## Quality Control Data (Continued)

### Semivolatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0169 - SVOC Water (Continued)</b>										
<b>Blank (BDL0169-BLK1)</b>					Prepared: 12/4/2023 Analyzed: 12/17/2023					
Naphthalene	ND		0.500	ug/L						
4-Chlorophenyl-phenylether	ND		0.500	ug/L						
Benzo[k]fluoranthene	ND		0.500	ug/L						
Benzo[b]fluoranthene	ND		0.500	ug/L						
Benzo[a]pyrene	ND		0.500	ug/L						
Hexachloroethane	ND		0.500	ug/L						
Benzo[a]anthracene	ND		0.500	ug/L						
Diethyl phthalate	ND		0.500	ug/L						
Benzidine	ND		0.500	ug/L						
Anthracene	ND		0.500	ug/L						
Aniline	ND		0.500	ug/L						
Acenaphthylene	ND		0.500	ug/L						
Acenaphthene	ND		0.500	ug/L						
Benzo(g,h,i)perylene	ND		0.500	ug/L						
4-Nitroaniline	ND		0.500	ug/L						
4-Chloroaniline	ND		0.500	ug/L						
4-Chloro-3-methylphenol	ND		0.500	ug/L						
Benzyl alcohol	ND		0.500	ug/L						
bis(2-chloro-1-methylethyl)ether	ND		0.500	ug/L						
bis(2-Chloroethoxy)methane	ND		0.500	ug/L						
Di (2-ethylhexyl) phthalate	ND		0.500	ug/L						
Carbazole	ND		0.500	ug/L						
Chrysene	ND		0.500	ug/L						
Dibenz(a,h)anthracene	ND		0.500	ug/L						
Dibenzofuran	ND		0.500	ug/L						
4-Nitrophenol	ND		0.500	ug/L						
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Surrogate: Phenol-2,3,4,5,6-d5			40.3	ug/L	50.0		80.6	51-112		
Surrogate: Nitrobenzene-d5			16.9	ug/L	25.0		67.6	65-110		
Surrogate: Terphenyl-d14			18.7	ug/L	25.0		74.8	57-133		
Surrogate: 2-Fluorophenol			34.1	ug/L	50.0		68.1	37-110		
Surrogate: 2-Fluorobiphenyl			18.8	ug/L	25.0		75.2	57-113		
Surrogate: 2,4,6-Tribromophenol			40.5	ug/L	50.0		81.0	48-120		

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504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

## Quality Control Data (Continued)

### Semivolatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0169 - SVOC Water (Continued)</b>										
<b>LCS (BDL0169-BS1)</b>										
Prepared: 12/4/2023 Analyzed: 12/17/2023										
Naphthalene	4.17		0.500	ug/L	5.00		83.4	70-120		
Fluorene	4.67		0.500	ug/L	5.00		93.4	74-120		
Hexachlorobenzene	4.58		0.500	ug/L	5.00		91.6	67-118		
Hexachlorobutadiene	4.10		0.500	ug/L	5.00		82.0	68-120		
Indeno(1,2,3-cd)pyrene	4.98		0.500	ug/L	5.00		99.6	62-123		
n-Nitrosodimethylamine	3.89		0.500	ug/L	5.00		77.8	60-120		
n-Nitroso-di-n-propylamine	4.09		0.500	ug/L	5.00		81.8	71-112		
n-Nitrosodiphenylamine	4.72		0.500	ug/L	5.00		94.4	70-121		
Pentachlorophenol	4.19		0.500	ug/L	5.00		83.8	51-118		
Phenanthrene	4.66		0.500	ug/L	5.00		93.2	74-120		
Phenol	4.45		0.500	ug/L	5.00		89.0	54-121		
Pyrene	4.56		0.500	ug/L	5.00		91.2	59-130		
Isophorone	4.24		0.500	ug/L	5.00		84.8	78-120		
Hexachloroethane	3.86		0.500	ug/L	5.00		77.2	68-120		
2,4-Dichlorophenol	4.26		0.500	ug/L	5.00		85.2	72-120		
1,2,4-Trichlorobenzene	4.02		0.500	ug/L	5.00		80.4	69-120		
4,6-Dinitro-2-methylphenol	4.66		0.500	ug/L	5.00		93.2	26-150		
3-Nitroaniline	3.27		0.500	ug/L	5.00		65.4	49-121		
3+4-Methylphenol	4.35		0.500	ug/L	5.00		87.0	68-120		
2-Nitrophenol	3.93		0.500	ug/L	5.00		78.6	69-120		
2-Nitroaniline	4.52		0.500	ug/L	5.00		90.4	69-120		
2-Methylnaphthalene	4.33		0.500	ug/L	5.00		86.6	67-121		
2-Chlorophenol	3.97		0.500	ug/L	5.00		79.4	64-120		
2-Chloronaphthalene	4.30		0.500	ug/L	5.00		86.0	72-120		
2,6-Dinitrotoluene	4.51		0.500	ug/L	5.00		90.2	67-116		
4-Chloro-3-methylphenol	4.37		0.500	ug/L	5.00		87.4	74-120		
2,4-Dinitrophenol	4.35		0.500	ug/L	5.00		87.0	21-128		
4-Chloroaniline	3.93		0.500	ug/L	5.00		78.6	30-130		
2,4,6-Trichlorophenol	4.48		0.500	ug/L	5.00		89.6	72-120		
2,4,5-Trichlorophenol	4.50		0.500	ug/L	5.00		90.0	71-120		
2,3,5,6-Tetrachlorophenol	4.51		0.500	ug/L	5.00		90.2	52-115		
2,3,4,6-Tetrachlorophenol	4.56		0.500	ug/L	5.00		91.2	66-120		
1-Methylnaphthalene	4.29		0.500	ug/L	5.00		85.8	67-121		
1,4-Dinitrobenzene	4.45		0.500	ug/L	5.00		89.0	71-121		
1,4-Dichlorobenzene (para-Dichlorobenzene)	3.94		0.500	ug/L	5.00		78.8	67-120		
1,3-Dinitrobenzene	4.55		0.500	ug/L	5.00		91.0	75-123		
m-Dichlorobenzene	3.92		0.500	ug/L	5.00		78.4	67-120		
1,2-Dinitrobenzene	4.59		0.500	ug/L	5.00		91.8	76-120		
1,2-Dichlorobenzene (ortho-Dichlorobenzene)	4.00		0.500	ug/L	5.00		80.0	67-120		
2,4-Dinitrotoluene	4.69		0.500	ug/L	5.00		93.8	74-121		
bis(2-Chloroethoxy)methane	4.21		0.500	ug/L	5.00		84.2	74-120		
Nitrobenzene	3.91		0.500	ug/L	5.00		78.2	71-120		
Fluoranthene	4.93		0.500	ug/L	5.00		98.6	70-121		
Di-n-octyl phthalate	4.55		0.500	ug/L	5.00		91.0	45-127		
Di-n-butyl phthalate	4.88		0.500	ug/L	5.00		97.6	74-124		
Dimethyl phthalate	4.59		0.500	ug/L	5.00		91.8	72-122		
Diethyl phthalate	4.67		0.500	ug/L	5.00		93.4	76-121		
Dibenzofuran	4.54		0.500	ug/L	5.00		90.8	75-120		
Dibenz(a,h)anthracene	5.17		0.500	ug/L	5.00		103	62-120		
Chrysene	5.01		0.500	ug/L	5.00		100	74-124		

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504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

## Quality Control Data (Continued)

### Semivolatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0169 - SVOC Water (Continued)</b>										
<b>LCS (BDL0169-BS1)</b>										
Prepared: 12/4/2023 Analyzed: 12/17/2023										
Carbazole	5.43		0.500	ug/L	5.00		109	76-123		
Benzyl Butyl Phthalate	4.56		0.500	ug/L	5.00		91.2	62-135		
4-Bromophenyl-phenylether	4.57		0.500	ug/L	5.00		91.4	71-121		
bis(2-Chloroethyl)ether	3.80		0.500	ug/L	5.00		76.0	70-120		
bis(2-chloro-1-methylethyl)ether	3.92		0.500	ug/L	5.00		78.4	69-120		
Benzo[k]fluoranthene	5.30		0.500	ug/L	5.00		106	71-121		
Benzo(g,h,i)perylene	5.30		0.500	ug/L	5.00		106	63-129		
Benzo[b]fluoranthene	5.12		0.500	ug/L	5.00		102	72-116		
Benzo[a]pyrene	4.93		0.500	ug/L	5.00		98.6	66-116		
Benzo[a]anthracene	4.71		0.500	ug/L	5.00		94.2	80-120		
Anthracene	4.72		0.500	ug/L	5.00		94.4	76-120		
Acenaphthylene	4.38		0.500	ug/L	5.00		87.6	75-120		
Acenaphthene	4.55		0.500	ug/L	5.00		91.0	76-120		
4-Nitrophenol	4.33		0.500	ug/L	5.00		86.6	52-118		
4-Nitroaniline	4.49		0.500	ug/L	5.00		89.8	47-128		
4-Chlorophenyl-phenylether	4.65		0.500	ug/L	5.00		93.0	72-120		
Di (2-ethylhexyl) phthalate	4.61		0.500	ug/L	5.00		92.2	60-144		
2-Methylphenol	4.14		0.500	ug/L	5.00		82.8	66-120		
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Surrogate: Phenol-2,3,4,5,6-d5			40.3	ug/L	50.0		80.5	51-112		
Surrogate: Nitrobenzene-d5			17.3	ug/L	25.0		69.2	65-110		
Surrogate: Terphenyl-d14			20.1	ug/L	25.0		80.4	57-133		
Surrogate: 2-Fluorophenol			38.2	ug/L	50.0		76.5	37-110		
Surrogate: 2-Fluorobiphenyl			19.7	ug/L	25.0		78.7	57-113		
Surrogate: 2,4,6-Tribromophenol			42.8	ug/L	50.0		85.7	48-120		
<b>LCS Dup (BDL0169-BSD1)</b>										
Prepared: 12/4/2023 Analyzed: 12/17/2023										
Benzo[a]anthracene	4.78		0.500	ug/L	5.00		95.6	80-120	1.48	25
Anthracene	4.87		0.500	ug/L	5.00		97.4	76-120	3.13	25
Acenaphthylene	4.54		0.500	ug/L	5.00		90.8	75-120	3.59	30
Acenaphthene	4.71		0.500	ug/L	5.00		94.2	76-120	3.46	25
Hexachlorobutadiene	4.35		0.500	ug/L	5.00		87.0	68-120	5.92	25
4-Nitrophenol	4.54		0.500	ug/L	5.00		90.8	52-118	4.74	35
Hexachloroethane	4.14		0.500	ug/L	5.00		82.8	68-120	7.00	28
Pentachlorophenol	4.41		0.500	ug/L	5.00		88.2	51-118	5.12	25
Indeno(1,2,3-cd)pyrene	4.87		0.500	ug/L	5.00		97.4	62-123	2.23	25
Benzo(g,h,i)perylene	5.15		0.500	ug/L	5.00		103	63-129	2.87	25
Isophorone	4.45		0.500	ug/L	5.00		89.0	78-120	4.83	25
Naphthalene	4.38		0.500	ug/L	5.00		87.6	70-120	4.91	25
Nitrobenzene	4.13		0.500	ug/L	5.00		82.6	71-120	5.47	25
n-Nitrosodimethylamine	4.18		0.500	ug/L	5.00		83.6	60-120	7.19	35
n-Nitroso-di-n-propylamine	4.31		0.500	ug/L	5.00		86.2	71-112	5.24	25
n-Nitrosodiphenylamine	5.00		0.500	ug/L	5.00		100	70-121	5.76	25
4-Nitroaniline	4.46		0.500	ug/L	5.00		89.2	47-128	0.670	32
Carbazole	5.74		0.500	ug/L	5.00		115	76-123	5.55	40
Dibenzofuran	4.70		0.500	ug/L	5.00		94.0	75-120	3.46	25
Dibenz(a,h)anthracene	5.04		0.500	ug/L	5.00		101	62-120	2.55	30
Diethyl phthalate	4.81		0.500	ug/L	5.00		96.2	76-121	2.95	25
Dimethyl phthalate	4.75		0.500	ug/L	5.00		95.0	72-122	3.43	25
Di-n-butyl phthalate	4.96		0.500	ug/L	5.00		99.2	74-124	1.63	25
Di-n-octyl phthalate	4.54		0.500	ug/L	5.00		90.8	45-127	0.220	32
Fluoranthene	4.93		0.500	ug/L	5.00		98.6	70-121	0.00	25

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504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email [spokane@anateklabs.com](mailto:spokane@anateklabs.com)

## Quality Control Data (Continued)

### Semivolatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0169 - SVOC Water (Continued)</b>										
<b>LCS Dup (BDL0169-BSD1)</b>										
					Prepared: 12/4/2023 Analyzed: 12/17/2023					
Benzo[a]pyrene	4.76		0.500	ug/L	5.00		95.2	66-116	3.51	25
2-Chloronaphthalene	4.46		0.500	ug/L	5.00		89.2	72-120	3.65	25
Benzo[b]fluoranthene	4.47		0.500	ug/L	5.00		89.4	72-116	13.6	25
Benzyl Butyl Phthalate	4.64		0.500	ug/L	5.00		92.8	62-135	1.74	34
Di (2-ethylhexyl) phthalate	4.63		0.500	ug/L	5.00		92.6	60-144	0.433	32
bis(2-Chloroethyl)ether	4.06		0.500	ug/L	5.00		81.2	70-120	6.62	30
bis(2-Chloroethoxy)methane	4.44		0.500	ug/L	5.00		88.8	74-120	5.32	25
bis(2-chloro-1-methylethyl)ether	4.17		0.500	ug/L	5.00		83.4	69-120	6.18	28
Benzo[k]fluoranthene	5.27		0.500	ug/L	5.00		105	71-121	0.568	25
Chrysene	5.09		0.500	ug/L	5.00		102	74-124	1.58	25
Hexachlorobenzene	4.75		0.500	ug/L	5.00		95.0	67-118	3.64	25
1,2-Dichlorobenzene (ortho-Dichlorobenzene)	4.23		0.500	ug/L	5.00		84.6	67-120	5.59	25
2,4-Dinitrophenol	4.61		0.500	ug/L	5.00		92.2	21-128	5.80	36
2,4-Dinitrotoluene	4.89		0.500	ug/L	5.00		97.8	74-121	4.18	25
2,6-Dinitrotoluene	4.75		0.500	ug/L	5.00		95.0	67-116	5.18	35
1-Methylnaphthalene	4.42		0.500	ug/L	5.00		88.4	67-121	2.99	25
1,4-Dinitrobenzene	4.74		0.500	ug/L	5.00		94.8	71-121	6.31	25
1,4-Dichlorobenzene (para-Dichlorobenzene)	4.16		0.500	ug/L	5.00		83.2	67-120	5.43	25
1,3-Dinitrobenzene	4.81		0.500	ug/L	5.00		96.2	75-123	5.56	25
2,4-Dichlorophenol	4.46		0.500	ug/L	5.00		89.2	72-120	4.59	25
1,2-Dinitrobenzene	4.83		0.500	ug/L	5.00		96.6	76-120	5.10	25
2,3,5,6-Tetrachlorophenol	4.81		0.500	ug/L	5.00		96.2	52-115	6.44	25
1,2,4-Trichlorobenzene	4.28		0.500	ug/L	5.00		85.6	69-120	6.27	25
2,3,4,6-Tetrachlorophenol	4.73		0.500	ug/L	5.00		94.6	66-120	3.66	25
2,4,6-Trichlorophenol	4.70		0.500	ug/L	5.00		94.0	72-120	4.79	25
Pyrene	4.72		0.500	ug/L	5.00		94.4	59-130	3.45	35
Phenanthrene	4.82		0.500	ug/L	5.00		96.4	74-120	3.38	25
Fluorene	4.79		0.500	ug/L	5.00		95.8	74-120	2.54	25
m-Dichlorobenzene	4.17		0.500	ug/L	5.00		83.4	67-120	6.18	25
4-Chloroaniline	4.46		0.500	ug/L	5.00		89.2	30-130	12.6	40
2,4,5-Trichlorophenol	4.69		0.500	ug/L	5.00		93.8	71-120	4.13	25
2-Chlorophenol	4.18		0.500	ug/L	5.00		83.6	64-120	5.15	33
Phenol	4.61		0.500	ug/L	5.00		92.2	54-121	3.53	33
4-Chlorophenyl-phenylether	4.82		0.500	ug/L	5.00		96.4	72-120	3.59	25
4-Chloro-3-methylphenol	4.62		0.500	ug/L	5.00		92.4	74-120	5.56	25
4-Bromophenyl-phenylether	4.79		0.500	ug/L	5.00		95.8	71-121	4.70	25
4,6-Dinitro-2-methylphenol	4.86		0.500	ug/L	5.00		97.2	26-150	4.20	25
2-Methylnaphthalene	4.51		0.500	ug/L	5.00		90.2	67-121	4.07	25
3-Nitroaniline	3.33		0.500	ug/L	5.00		66.6	49-121	1.82	39
3+4-Methylphenol	4.55		0.500	ug/L	5.00		91.0	68-120	4.49	25
2-Nitrophenol	4.12		0.500	ug/L	5.00		82.4	69-120	4.72	25
2-Nitroaniline	4.76		0.500	ug/L	5.00		95.2	69-120	5.17	25
2-Methylphenol	4.43		0.500	ug/L	5.00		88.6	66-120	6.77	25
<i>Surrogate: Phenol-2,3,4,5,6-d5</i>			<i>40.9</i>	<i>ug/L</i>	<i>50.0</i>		<i>81.8</i>	<i>51-112</i>		
<i>Surrogate: Nitrobenzene-d5</i>			<i>18.8</i>	<i>ug/L</i>	<i>25.0</i>		<i>75.0</i>	<i>65-110</i>		
<i>Surrogate: Terphenyl-d14</i>			<i>21.3</i>	<i>ug/L</i>	<i>25.0</i>		<i>85.2</i>	<i>57-133</i>		
<i>Surrogate: 2-Fluorophenol</i>			<i>38.3</i>	<i>ug/L</i>	<i>50.0</i>		<i>76.5</i>	<i>37-110</i>		
<i>Surrogate: 2-Fluorobiphenyl</i>			<i>20.6</i>	<i>ug/L</i>	<i>25.0</i>		<i>82.2</i>	<i>57-113</i>		
<i>Surrogate: 2,4,6-Tribromophenol</i>			<i>44.4</i>	<i>ug/L</i>	<i>50.0</i>		<i>88.8</i>	<i>48-120</i>		

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1282 Alturas Drive - Moscow, ID 83843 - (208) 883-2839 - email moscow@anateklabs.com  
 504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

## Quality Control Data (Continued)

### Volatiles

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0115 - VOC</b>										
<b>Blank (BDL0115-BLK1)</b>					Prepared & Analyzed: 12/4/2023					
methyl-t-butyl ether (MTBE)	ND		0.500	ug/L						
Methylene Chloride (Dichloromethane)	ND		2.50	ug/L						
Methyl isobutyl ketone (MIBK)	ND		2.50	ug/L						
Methyl ethyl ketone (MEK)	ND		2.50	ug/L						
m/p Xylenes (MCL for total)	ND		0.500	ug/L						
Isopropylbenzene	ND		0.500	ug/L						
Hexachlorobutadiene	ND		0.500	ug/L						
Dibromochloromethane	ND		0.500	ug/L						
Dichlorodifluoromethane	ND		0.500	ug/L						
Chloromethane	ND		0.500	ug/L						
Dibromomethane	ND		0.500	ug/L						
tert-Butylbenzene	ND		0.500	ug/L						
cis-1,3-Dichloropropene	ND		0.500	ug/L						
cis-1,2-Dichloroethylene	ND		0.500	ug/L						
Ethylbenzene	ND		0.500	ug/L						
Tetrachloroethylene	ND		0.500	ug/L						
trans-1,2 Dichloroethylene	ND		0.500	ug/L						
trans-1,3-Dichloropropene	ND		0.500	ug/L						
m-Dichlorobenzene	ND		0.500	ug/L						
Chloroform	ND		0.500	ug/L						
Trichloroethene	ND		0.500	ug/L						
sec-Butylbenzene	ND		0.500	ug/L						
Toluene	ND		0.500	ug/L						
Naphthalene	ND		0.500	ug/L						
Styrene	ND		0.500	ug/L						
p-isopropyltoluene	ND		0.500	ug/L						
o-Xylene (MCL for total)	ND		0.500	ug/L						
n-Propylbenzene	ND		0.500	ug/L						
Trichlorofluoromethane	ND		0.500	ug/L						
n-Butylbenzene	ND		0.500	ug/L						
DBCP (screening)	ND		0.500	ug/L						
1,4-Dichlorobenzene (para-Dichlorobenzene)	ND		0.500	ug/L						
1,3,5-Trimethylbenzene	ND		0.500	ug/L						
1,2-Dichloropropane	ND		0.500	ug/L						
1,2-Dichloroethane	ND		0.500	ug/L						
2,2-Dichloropropane	ND		0.500	ug/L						
EDB (screening)	ND		0.500	ug/L						
o-Chlorotoluene	ND		0.500	ug/L						
1,2,4-Trimethylbenzene	ND		0.500	ug/L						
1,2,4-Trichlorobenzene	ND		0.500	ug/L						
1,2,3-Trichloropropane	ND		0.500	ug/L						
1,2,3-Trichlorobenzene	ND		0.500	ug/L						
Vinyl Chloride	ND		0.500	ug/L						
1,1,1,2-Tetrachloroethane	ND		0.500	ug/L						
1,2-Dichlorobenzene (ortho-Dichlorobenzene)	ND		0.500	ug/L						
Bromobenzene	ND		0.500	ug/L						
Chlorobenzene (Monochlorobenzene)	ND		0.500	ug/L						
Carbon Tetrachloride	ND		0.500	ug/L						
Carbon disulfide	ND		0.500	ug/L						
Bromomethane	ND		0.500	ug/L						

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## Quality Control Data (Continued)

### Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0115 - VOC (Continued)</b>										
<b>Blank (BDL0115-BLK1)</b>						Prepared & Analyzed: 12/4/2023				
Bromoform	ND		0.500	ug/L						
1,3-Dichloropropane	ND		0.500	ug/L						
Bromochloromethane	ND		0.500	ug/L						
Chloroethane	ND		0.500	ug/L						
Benzene	ND		0.500	ug/L						
Acrylonitrile	ND		0.500	ug/L						
Acetone	ND		2.50	ug/L						
p-Chlorotoluene	ND		0.500	ug/L						
2-hexanone	ND		2.50	ug/L						
Bromodichloromethane	ND		0.500	ug/L						
1,1-Dichloropropene	ND		0.500	ug/L						
1,1,1-Trichloroethane	ND		0.500	ug/L						
1,1,2-Trichloroethane	ND		0.500	ug/L						
1,1-Dichloroethane	ND		0.500	ug/L						
1,1-Dichloroethylene	ND		0.500	ug/L						
1,1,2,2-Tetrachloroethane	ND		0.500	ug/L						
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Surrogate: Toluene-d8			19.6	ug/L	20.0		97.9	70-130		
Surrogate: 4-Bromofluorobenzene			19.3	ug/L	20.0		96.4	70-130		
Surrogate: 1,2-Dichlorobenzene-d4			20.6	ug/L	20.0		103	70-130		

### LCS (BDL0115-BS1)

Prepared & Analyzed: 12/4/2023										
Dibromomethane	2.05		0.500	ug/L	2.00		103	80-120		
Naphthalene	1.87		0.500	ug/L	2.00		93.5	66-133		
methyl-t-butyl ether (MTBE)	2.02		0.500	ug/L	2.00		101	71-130		
Methyl isobutyl ketone (MIBK)	1.62		2.50	ug/L	2.00		81.0	70-136		
Methyl ethyl ketone (MEK)	1.16		2.50	ug/L	2.00		58.0	55-154		
m/p Xylenes (MCL for total)	3.82		0.500	ug/L	4.00		95.5	80-120		
Isopropylbenzene	1.85		0.500	ug/L	2.00		92.5	80-120		
Hexachlorobutadiene	2.04		0.500	ug/L	2.00		102	80-120		
n-Butylbenzene	1.83		0.500	ug/L	2.00		91.5	74-122		
Dichlorodifluoromethane	1.53		0.500	ug/L	2.00		76.5	57-130		
sec-Butylbenzene	1.79		0.500	ug/L	2.00		89.5	80-120		
Dibromochloromethane	1.89		0.500	ug/L	2.00		94.5	80-121		
cis-1,3-Dichloropropene	1.85		0.500	ug/L	2.00		92.5	79-123		
Ethylbenzene	1.90		0.500	ug/L	2.00		95.0	80-120		
n-Propylbenzene	1.85		0.500	ug/L	2.00		92.5	80-120		
Chloroform	1.94		0.500	ug/L	2.00		97.0	80-120		
p-isopropyltoluene	1.91		0.500	ug/L	2.00		95.5	80-120		
Chloroethane	1.59		0.500	ug/L	2.00		79.5	78-120		
Styrene	1.83		0.500	ug/L	2.00		91.5	80-120		
tert-Butylbenzene	1.82		0.500	ug/L	2.00		91.0	80-120		
Tetrachloroethylene	1.86		0.500	ug/L	2.00		93.0	80-120		
Toluene	1.94		0.500	ug/L	2.00		97.0	80-120		
trans-1,2 Dichloroethylene	1.79		0.500	ug/L	2.00		89.5	80-120		
trans-1,3-Dichloropropene	1.68		0.500	ug/L	2.00		84.0	69-130		
Trichloroethene	1.93		0.500	ug/L	2.00		96.5	80-120		
Trichlorofluoromethane	1.60		0.500	ug/L	2.00		80.0	61-140		
Vinyl Chloride	1.74		0.500	ug/L	2.00		87.0	75-120		
o-Xylene (MCL for total)	1.91		0.500	ug/L	2.00		95.5	80-120		
1,1,1,2-Tetrachloroethane	1.93		0.500	ug/L	2.00		96.5	80-120		

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## Quality Control Data (Continued)

### Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0115 - VOC (Continued)</b>										
<b>LCS (BDL0115-BS1)</b>					Prepared & Analyzed: 12/4/2023					
cis-1,2-Dichloroethylene	1.90		0.500	ug/L	2.00		95.0	80-120		
1,2-Dichloroethane	2.00		0.500	ug/L	2.00		100	80-120		
1,2-Dichlorobenzene (ortho-Dichlorobenzene)	2.06		0.500	ug/L	2.00		103	80-120		
EDB (screening)	1.96		0.500	ug/L	2.00		98.0	70-130		
DBCP (screening)	1.91		0.500	ug/L	2.00		95.5	71-128		
1,3,5-Trimethylbenzene	1.89		0.500	ug/L	2.00		94.5	80-121		
1,2,4-Trichlorobenzene	1.93		0.500	ug/L	2.00		96.5	80-120		
m-Dichlorobenzene	2.01		0.500	ug/L	2.00		101	80-120		
1,1,1-Trichloroethane	1.76		0.500	ug/L	2.00		88.0	80-120		
1,1,2,2-Tetrachloroethane	2.00		0.500	ug/L	2.00		100	77-123		
1,1,2-Trichloroethane	1.97		0.500	ug/L	2.00		98.5	80-120		
1,1-Dichloroethane	1.87		0.500	ug/L	2.00		93.5	80-120		
1,1-Dichloroethylene	1.71		0.500	ug/L	2.00		85.5	70-129		
1,1-Dichloropropene	1.74		0.500	ug/L	2.00		87.0	80-120		
1,2,3-Trichlorobenzene	2.01		0.500	ug/L	2.00		101	78-120		
1,2,4-Trimethylbenzene	1.87		0.500	ug/L	2.00		93.5	80-120		
Acrylonitrile	1.57		0.500	ug/L	2.00		78.5	73-131		
Chlorobenzene (Monochlorobenzene)	1.99		0.500	ug/L	2.00		99.5	80-120		
Carbon Tetrachloride	1.62		0.500	ug/L	2.00		81.0	80-120		
Carbon disulfide	1.75		0.500	ug/L	2.00		87.5	80-120		
Bromoform	1.88		0.500	ug/L	2.00		94.0	68-133		
Bromodichloromethane	1.91		0.500	ug/L	2.00		95.5	80-120		
Bromochloromethane	1.88		0.500	ug/L	2.00		94.0	80-120		
1,2-Dichloropropane	1.95		0.500	ug/L	2.00		97.5	80-120		
Benzene	1.89		0.500	ug/L	2.00		94.5	80-120		
1,2,3-Trichloropropane	2.08		0.500	ug/L	2.00		104	80-120		
p-Chlorotoluene	1.95		0.500	ug/L	2.00		97.5	80-124		
2-hexanone	1.45		2.50	ug/L	2.00		72.5	65-140		
o-Chlorotoluene	1.96		0.500	ug/L	2.00		98.0	80-120		
2,2-Dichloropropane	1.74		0.500	ug/L	2.00		87.0	80-120		
1,4-Dichlorobenzene (para-Dichlorobenzene)	2.08		0.500	ug/L	2.00		104	80-120		
1,3-Dichloropropane	1.97		0.500	ug/L	2.00		98.5	80-120		
Bromobenzene	1.95		0.500	ug/L	2.00		97.5	80-120		
<hr style="border-top: 1px dashed black;"/>										
Surrogate: Toluene-d8			20.1	ug/L	20.0		101	70-130		
Surrogate: 4-Bromofluorobenzene			20.1	ug/L	20.0		101	70-130		
Surrogate: 1,2-Dichlorobenzene-d4			20.2	ug/L	20.0		101	70-130		

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## Quality Control Data (Continued)

### Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0115 - VOC (Continued)</b>										
<b>Matrix Spike (BDL0115-MS1)</b>			<b>Source: MDK0735-04</b>			<b>Prepared &amp; Analyzed: 12/4/2023</b>				
trans-1,2 Dichloroethylene	9.67		0.500	ug/L	10.0	ND	96.7	70-130		
Dibromochloromethane	9.04		0.500	ug/L	10.0	ND	90.4	70-130		
Carbon disulfide	10.1		0.500	ug/L	10.0	ND	101	70-130		
m/p Xylenes (MCL for total)	19.1		0.500	ug/L	20.0	ND	95.7	57-130		
Isopropylbenzene	9.61		0.500	ug/L	10.0	ND	96.1	70-130		
Hexachlorobutadiene	8.91		0.500	ug/L	10.0	ND	89.1	70-130		
Ethylbenzene	9.40		0.500	ug/L	10.0	ND	94.0	70-130		
Methyl isobutyl ketone (MIBK)	9.02		2.50	ug/L	10.0	ND	90.2	53-167		
Dibromomethane	9.73		0.500	ug/L	10.0	ND	97.3	70-130		
methyl-t-butyl ether (MTBE)	9.21		0.500	ug/L	10.0	ND	92.1	57-138		
cis-1,3-Dichloropropene	8.77		0.500	ug/L	10.0	ND	87.7	74-124		
cis-1,2-Dichloroethylene	9.69		0.500	ug/L	10.0	ND	96.9	70-130		
Chloroform	9.67		0.500	ug/L	10.0	ND	96.7	70-130		
Chloroethane	10.1		0.500	ug/L	10.0	ND	101	68-138		
Chlorobenzene (Monochlorobenzene)	9.31		0.500	ug/L	10.0	ND	93.1	70-130		
Toluene	9.67		0.500	ug/L	10.0	ND	96.7	70-130		
Dichlorodifluoromethane	9.03		0.500	ug/L	10.0	ND	90.3	57-136		
Styrene	8.85		0.500	ug/L	10.0	ND	88.5	30-130		
Vinyl Chloride	10.2		0.500	ug/L	10.0	ND	102	70-130		
Trichlorofluoromethane	10.4		0.500	ug/L	10.0	ND	104	50-154		
Trichloroethene	9.76		0.500	ug/L	10.0	ND	97.6	70-130		
trans-1,3-Dichloropropene	8.62		0.500	ug/L	10.0	ND	86.2	61-131		
Methyl ethyl ketone (MEK)	9.04		2.50	ug/L	10.0	ND	90.4	47-165		
tert-Butylbenzene	9.51		0.500	ug/L	10.0	ND	95.1	70-130		
Bromoform	8.11		0.500	ug/L	10.0	ND	81.1	59-140		
sec-Butylbenzene	9.77		0.500	ug/L	10.0	ND	97.7	70-130		
p-isopropyltoluene	9.70		0.500	ug/L	10.0	ND	97.0	70-130		
o-Xylene (MCL for total)	9.48		0.500	ug/L	10.0	ND	94.8	62-127		
n-Propylbenzene	9.67		0.500	ug/L	10.0	ND	96.7	70-130		
n-Butylbenzene	9.48		0.500	ug/L	10.0	ND	94.8	67-130		
Naphthalene	7.76		0.500	ug/L	10.0	ND	77.6	56-147		
Tetrachloroethylene	9.25		0.500	ug/L	10.0	ND	92.5	70-130		
1,2,3-Trichlorobenzene	8.58		0.500	ug/L	10.0	ND	85.8	67-134		
Carbon Tetrachloride	10.3		0.500	ug/L	10.0	ND	103	70-130		
1,2-Dichlorobenzene (ortho-Dichlorobenzene)	9.04		0.500	ug/L	10.0	ND	90.4	70-130		
EDB (screening)	9.33		0.500	ug/L	10.0	ND	93.3	70-130		
DBCP (screening)	8.49		0.500	ug/L	10.0	ND	84.9	55-146		
1,2,4-Trimethylbenzene	9.81		0.500	ug/L	10.0	ND	98.1	40-140		
1,2-Dichloroethane	9.64		0.500	ug/L	10.0	ND	96.4	70-130		
1,2,3-Trichloropropane	9.49		0.500	ug/L	10.0	ND	94.9	69-137		
1,2-Dichloropropane	9.47		0.500	ug/L	10.0	ND	94.7	70-130		
1,1-Dichloropropene	9.88		0.500	ug/L	10.0	ND	98.8	70-130		
1,1-Dichloroethylene	9.73		0.500	ug/L	10.0	ND	97.3	70-130		
1,1-Dichloroethane	9.63		0.500	ug/L	10.0	ND	96.3	70-130		
1,1,2-Trichloroethane	9.24		0.500	ug/L	10.0	ND	92.4	70-130		
1,1,2,2-Tetrachloroethane	9.42		0.500	ug/L	10.0	ND	94.2	67-136		
1,1,1-Trichloroethane	9.76		0.500	ug/L	10.0	ND	97.6	70-130		
1,2,4-Trichlorobenzene	8.39		0.500	ug/L	10.0	ND	83.9	70-130		
2-hexanone	8.83		2.50	ug/L	10.0	ND	88.3	43-175		
Bromodichloromethane	9.56		0.500	ug/L	10.0	ND	95.6	70-130		

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## Quality Control Data (Continued)

### Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0115 - VOC (Continued)</b>										
<b>Matrix Spike (BDL0115-MS1)</b>		<b>Source: MDK0735-04</b>			<b>Prepared &amp; Analyzed: 12/4/2023</b>					
Bromochloromethane	9.93		0.500	ug/L	10.0	ND	99.3	70-130		
Bromobenzene	9.22		0.500	ug/L	10.0	ND	92.2	70-130		
Benzene	9.67		0.500	ug/L	10.0	ND	96.7	70-130		
Acrylonitrile	8.95		0.500	ug/L	10.0	ND	89.5	65-137		
1,1,1,2-Tetrachloroethane	9.28		0.500	ug/L	10.0	ND	92.8	70-130		
o-Chlorotoluene	9.58		0.500	ug/L	10.0	ND	95.8	70-130		
2,2-Dichloropropane	9.57		0.500	ug/L	10.0	ND	95.7	70-130		
1,4-Dichlorobenzene (para-Dichlorobenzene)	9.06		0.500	ug/L	10.0	ND	90.6	70-130		
1,3-Dichloropropane	9.23		0.500	ug/L	10.0	ND	92.3	70-130		
m-Dichlorobenzene	9.12		0.500	ug/L	10.0	ND	91.2	70-130		
1,3,5-Trimethylbenzene	9.78		0.500	ug/L	10.0	ND	97.8	40-140		
p-Chlorotoluene	9.63		0.500	ug/L	10.0	ND	96.3	70-130		
-----										
Surrogate: Toluene-d8			20.5	ug/L	20.0		102	70-130		
Surrogate: 4-Bromofluorobenzene			20.5	ug/L	20.0		102	70-130		
Surrogate: 1,2-Dichlorobenzene-d4			19.8	ug/L	20.0		99.0	70-130		

<b>Matrix Spike Dup (BDL0115-MSD1)</b>		<b>Source: MDK0735-04</b>			<b>Prepared &amp; Analyzed: 12/4/2023</b>					
1,2-Dichloroethane	9.54		0.500	ug/L	10.0	ND	95.4	70-130	1.04	20
Dichlorodifluoromethane	8.48		0.500	ug/L	10.0	ND	84.8	57-136	6.28	20
Chlorobenzene (Monochlorobenzene)	9.09		0.500	ug/L	10.0	ND	90.9	70-130	2.39	20
Methyl isobutyl ketone (MIBK)	9.24		2.50	ug/L	10.0	ND	92.4	53-167	2.41	20
Methyl ethyl ketone (MEK)	9.41		2.50	ug/L	10.0	ND	94.1	47-165	4.01	20
m/p Xylenes (MCL for total)	18.4		0.500	ug/L	20.0	ND	91.9	57-130	4.05	20
Isopropylbenzene	9.29		0.500	ug/L	10.0	ND	92.9	70-130	3.39	20
Naphthalene	8.12		0.500	ug/L	10.0	ND	81.2	56-147	4.53	20
Ethylbenzene	9.07		0.500	ug/L	10.0	ND	90.7	70-130	3.57	20
n-Butylbenzene	8.94		0.500	ug/L	10.0	ND	89.4	67-130	5.86	20
Dibromomethane	9.66		0.500	ug/L	10.0	ND	96.6	70-130	0.722	20
Dibromochloromethane	9.12		0.500	ug/L	10.0	ND	91.2	70-130	0.881	20
cis-1,3-Dichloropropene	8.76		0.500	ug/L	10.0	ND	87.6	74-124	0.114	20
cis-1,2-Dichloroethylene	9.31		0.500	ug/L	10.0	ND	93.1	70-130	4.00	20
Chloroform	9.43		0.500	ug/L	10.0	ND	94.3	70-130	2.51	20
1,2-Dichlorobenzene (ortho-Dichlorobenzene)	8.88		0.500	ug/L	10.0	ND	88.8	70-130	1.79	20
Hexachlorobutadiene	8.86		0.500	ug/L	10.0	ND	88.6	70-130	0.563	20
Tetrachloroethylene	8.82		0.500	ug/L	10.0	ND	88.2	70-130	4.76	20
Vinyl Chloride	9.73		0.500	ug/L	10.0	ND	97.3	70-130	4.72	20
Trichlorofluoromethane	9.90		0.500	ug/L	10.0	ND	99.0	50-154	5.31	20
Trichloroethene	9.47		0.500	ug/L	10.0	ND	94.7	70-130	3.02	20
trans-1,3-Dichloropropene	8.81		0.500	ug/L	10.0	ND	88.1	61-131	2.18	20
trans-1,2 Dichloroethylene	9.30		0.500	ug/L	10.0	ND	93.0	70-130	3.90	20
methyl-t-butyl ether (MTBE)	9.28		0.500	ug/L	10.0	ND	92.8	57-138	0.757	20
Toluene	9.25		0.500	ug/L	10.0	ND	92.5	70-130	4.44	20
Carbon Tetrachloride	9.90		0.500	ug/L	10.0	ND	99.0	70-130	3.77	20
tert-Butylbenzene	9.10		0.500	ug/L	10.0	ND	91.0	70-130	4.41	20
Styrene	8.56		0.500	ug/L	10.0	ND	85.6	30-130	3.33	20
sec-Butylbenzene	9.36		0.500	ug/L	10.0	ND	93.6	70-130	4.29	20
p-isopropyltoluene	9.19		0.500	ug/L	10.0	ND	91.9	70-130	5.40	20
o-Xylene (MCL for total)	9.22		0.500	ug/L	10.0	ND	92.2	62-127	2.78	20
n-Propylbenzene	9.21		0.500	ug/L	10.0	ND	92.1	70-130	4.87	20
1,2,3-Trichlorobenzene	8.92		0.500	ug/L	10.0	ND	89.2	67-134	3.89	20

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## Quality Control Data (Continued)

### Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0115 - VOC (Continued)</b>										
<b>Matrix Spike Dup (BDL0115-MSD1)</b>			<b>Source: MDK0735-04</b>			Prepared & Analyzed: 12/4/2023				
Chloroethane	9.75		0.500	ug/L	10.0	ND	97.5	68-138	3.43	20
EDB (screening)	9.44		0.500	ug/L	10.0	ND	94.4	70-130	1.17	20
DBCP (screening)	9.05		0.500	ug/L	10.0	ND	90.5	55-146	6.39	20
1,2,4-Trimethylbenzene	9.32		0.500	ug/L	10.0	ND	93.2	40-140	5.12	20
1,3,5-Trimethylbenzene	9.32		0.500	ug/L	10.0	ND	93.2	40-140	4.82	20
1,2,3-Trichloropropane	9.53		0.500	ug/L	10.0	ND	95.3	69-137	0.421	20
m-Dichlorobenzene	8.95		0.500	ug/L	10.0	ND	89.5	70-130	1.88	20
1,1-Dichloropropene	9.43		0.500	ug/L	10.0	ND	94.3	70-130	4.66	20
1,1-Dichloroethylene	9.30		0.500	ug/L	10.0	ND	93.0	70-130	4.52	20
1,1-Dichloroethane	9.30		0.500	ug/L	10.0	ND	93.0	70-130	3.49	20
1,1,2-Trichloroethane	9.43		0.500	ug/L	10.0	ND	94.3	70-130	2.04	20
1,1,2,2-Tetrachloroethane	9.60		0.500	ug/L	10.0	ND	96.0	67-136	1.89	20
1,1,1-Trichloroethane	9.54		0.500	ug/L	10.0	ND	95.4	70-130	2.28	20
1,2,4-Trichlorobenzene	8.53		0.500	ug/L	10.0	ND	85.3	70-130	1.65	20
p-Chlorotoluene	9.11		0.500	ug/L	10.0	ND	91.1	70-130	5.55	20
Carbon disulfide	8.89		0.500	ug/L	10.0	ND	98.9	70-130	2.40	20
Bromoform	8.17		0.500	ug/L	10.0	ND	81.7	59-140	0.737	20
Bromodichloromethane	9.39		0.500	ug/L	10.0	ND	93.9	70-130	1.79	20
Bromochloromethane	9.69		0.500	ug/L	10.0	ND	96.9	70-130	2.45	20
Bromobenzene	9.00		0.500	ug/L	10.0	ND	90.0	70-130	2.41	20
1,2-Dichloropropane	9.28		0.500	ug/L	10.0	ND	92.8	70-130	2.03	20
Acrylonitrile	9.89		0.500	ug/L	10.0	ND	98.9	65-137	9.98	20
1,1,1,2-Tetrachloroethane	9.21		0.500	ug/L	10.0	ND	92.1	70-130	0.757	20
2-hexanone	9.26		2.50	ug/L	10.0	ND	92.6	43-175	4.75	20
o-Chlorotoluene	9.31		0.500	ug/L	10.0	ND	93.1	70-130	2.86	20
2,2-Dichloropropane	9.13		0.500	ug/L	10.0	ND	91.3	70-130	4.71	20
1,4-Dichlorobenzene (para-Dichlorobenzene)	9.01		0.500	ug/L	10.0	ND	90.1	70-130	0.553	20
1,3-Dichloropropane	9.28		0.500	ug/L	10.0	ND	92.8	70-130	0.540	20
Benzene	9.35		0.500	ug/L	10.0	ND	93.5	70-130	3.36	20
-----										
Surrogate: Toluene-d8			20.2	ug/L	20.0		101	70-130		
Surrogate: 4-Bromofluorobenzene			20.4	ug/L	20.0		102	70-130		
Surrogate: 1,2-Dichlorobenzene-d4			19.9	ug/L	20.0		99.4	70-130		

**ANATEK LABS**

*Chain of Custody Record*

1282 Alturas  
504 E Sprague



19

Company Name: PBS Engineering and Environmental  
 Address: 4412 S Corbett Ave  
 City: Portland State: OR Zip: 97239  
 Project Manager: Scott Braunsten  
 Project Name & #: Camp Bonneville, 76151.012  
 Purchase Order #:  
 Phone: 503-248-1939  
 Sampler Name & Phone: D. R. Ruk + R. Martin 646-734-9677  
 Email Address(es): scott.braunsten@pbsusa.com, samantha.eckes@pbsusa.com

Preservative:  Normal  Next Day\*  2nd Day\*  Other\*  
 \*All rush order requests must have prior approval  
 Phone \_\_\_\_\_ Email \_\_\_\_\_  
 www.anateklabs.com/pricing.html  
 Due 12/15/23

Lab ID	Sample Identification	Sampling Date/Time	Matrix	List Analyses Requested														
				Preservative	# of Containers	Sample Volume	VOCs by 8260B	Explosives by 8330	Perchlorate by 8850									
	CH033LCMWOHSM	11-29-23 / 8:20	H2O	<input checked="" type="checkbox"/>	9		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>									
	CH033LCMWOHDM			<input checked="" type="checkbox"/>	9		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>									
	CH033LYM17W	10:20		<input checked="" type="checkbox"/>	6		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>									
	CH033LYM18W	11:15		<input checked="" type="checkbox"/>	14		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>									
	CH033LYMWO7BW	12:05		<input checked="" type="checkbox"/>	6		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>									
	CH033LYMWO1AW	13:10		<input checked="" type="checkbox"/>	6		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>									
	CH033LYMWO1BW	13:45		<input checked="" type="checkbox"/>	6		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>									
	CH033LYMWO4AW	14:30		<input checked="" type="checkbox"/>	6		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>									
	CH033LYMWO5AW	15:15		<input checked="" type="checkbox"/>	6		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>									
	11A9A3TB			<input checked="" type="checkbox"/>	1		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>									

**Note Special Instructions/Comments**  
 Please send login confirmation  
 Please provide EQUIS EDD + WA EIM

MS/MSD

Inspection Checklist

Received Intact?  Y  N  
 Labels & Chains Agree?  Y  N  
 Containers Sealed?  Y  N  
 No VOC Head Space?  Y  N  
 Cooler?  Y  N  
 Ice/Ice Packs Present?  Y  N

Temperature (°C): \_\_\_\_\_  
 Number of Containers: \_\_\_\_\_  
 Shipped Via: \_\_\_\_\_  
 Preservative: \_\_\_\_\_

Date & Time: \_\_\_\_\_  
 Inspected By: \_\_\_\_\_



Sample Receipt and Preservation Form

Client Name: PBS Engineering

TAT:  Normal RUSH:      days

Samples Received From:  FedEx  UPS  USPS  Client  Courier Other:     

Custody Seal on Cooler/Box: Yes  No  Custody Seals Intact: Yes  No  N/A

Number of Coolers/Boxes: 4 Type of Ice:  Wet Ice  Ice Packs  Dry Ice  None

Packing Material:  Bubble Wrap  Bags  Foam/Peanuts  Paper  None Other:     

Cooler Temp As Read (°C): 3.2 Cooler Temp Corrected (°C):      Thermometer Used: 1R5

Comments:

Samples Received Intact?  Yes  No  N/A

Chain of Custody Present/Complete?  Yes  No  N/A

Labels and Chains Agree?  Yes  No  N/A

Samples Received Within Hold Time?  Yes  No  N/A

Correct Containers Received?  Yes  No  N/A

Anatek Bottles Used?  Yes  No  Unknown

Total Number of Sample Bottles Received:     


Samples Properly Preserved?  Yes  No  N/A

*If No, record preservation and pH-after details*

VOC Vials Free of HeadSpace (<6mm)?  Yes  No  N/A

VOC Trip Blanks Present?  Yes  No  N/A

Initial pH:	pH Paper ID:
<2 or	

Record preservatives (and lot numbers, if known) for containers below:

G11 - Explosives X 22  
 G11 - SVOC 8270 X 4  
 P125 - perchlorate by 6850 X 9  
 G44 - HCl (2309) VOC 8260 X 31 + TB  
 P250 - PP Metals X 2

Notes, comments, etc. (also use this space if contacting the client - record names and date/time)

Received/Inspected By: SM Date/Time: 11/30/23 14:19  
Form F19.01 - Eff 1 Dec 2022

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**Client:** PBS Engineering - Portland  
**Address:** 4412 SW Corbett Ave  
Portland, OR 97239  
**Attn:** Scott Braunsten

**Work Order:** MDL0022  
**Project:** Camp Bonneville, 76151.012  
**Reported:** 1/24/2024 11:36

## Analytical Results Report

**Sample Location:** 04Q23L4MW03BW  
**Lab/Sample Number:** MDL0022-01 **Collect Date:** 11/30/23 09:15  
**Date Received:** 11/29/23 13:04 **Collected By:** D.Rukki, R.Martin  
**Matrix:** Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Inorganics</b>							
Perchlorate	14.8	ug/L	0.500	12/12/23 20:31	GPB	EPA 6850	
<b>Semivolatiles</b>							
1,3,5-TNB	ND	ug/L	0.500	12/27/23 10:44	MER	EPA 8330B	
1,3-Dinitrobenzene	ND	ug/L	0.500	12/27/23 10:44	MER	EPA 8330B	
2,4,6-Trinitrotoluene	ND	ug/L	0.100	12/27/23 10:44	MER	EPA 8330B	
2,4-Dinitrotoluene	ND	ug/L	0.100	12/27/23 10:44	MER	EPA 8330B	
2,6-DNT	ND	ug/L	0.500	12/27/23 10:44	MER	EPA 8330B	
2-Amino-4,6-dinitrotoluene	ND	ug/L	0.500	12/27/23 10:44	MER	EPA 8330B	
2-Nitrotoluene	ND	ug/L	0.500	12/27/23 10:44	MER	EPA 8330B	
3-Nitrotoluene	ND	ug/L	0.500	12/27/23 10:44	MER	EPA 8330B	
4-Amino-2,6-dinitrotoluene	ND	ug/L	0.500	12/27/23 10:44	MER	EPA 8330B	
4-Nitrotoluene	ND	ug/L	0.500	12/27/23 10:44	MER	EPA 8330B	
HMX	ND	ug/L	0.100	12/27/23 10:44	MER	EPA 8330B	
NB	ND	ug/L	0.500	12/27/23 10:44	MER	EPA 8330B	
RDX	4.65	ug/L	0.100	12/27/23 10:44	MER	EPA 8330B	
Tetryl	ND	ug/L	0.500	12/27/23 10:44	MER	EPA 8330B	
<hr/>							
<i>Surrogate: 1,2-Dinitrobenzene</i>	<i>93.7%</i>		<i>70-130</i>	<i>12/27/23 10:44</i>	<i>MER</i>	<i>EPA 8330B</i>	
<b>Volatiles</b>							
1,1,1,2-Tetrachloroethane	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
1,1,1-Trichloroethane	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
1,1,2-Trichloroethane	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
1,1-Dichloroethane	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
1,1-Dichloroethene	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
1,1-dichloropropene	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
1,2,3-Trichlorobenzene	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
1,2,3-Trichloropropane	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
1,2,4-Trichlorobenzene	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
1,2,4-Trimethylbenzene	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
1,2-Dibromo-3-chloropropane (DBCP)	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
1,2-Dichlorobenzene	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
1,2-Dichloroethane	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
1,2-Dichloropropane	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
1,3,5-Trimethylbenzene	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
1,3-Dichlorobenzene	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	

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Sample Location: 04Q23L4MW03BW  
 Lab/Sample Number: MDL0022-01 Collect Date: 11/30/23 09:15  
 Date Received: 11/29/23 13:04 Collected By: D.Rukki, R.Martin  
 Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Volatiles (Continued)</b>							
1,3-Dichloropropane	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
1,4-Dichlorobenzene	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
2,2-Dichloropropane	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
2-Chlorotoluene	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
2-hexanone	ND	ug/L	2.50	12/5/23 11:27	BKP	EPA 8260D	
4-Chlorotoluene	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
Acetone	ND	ug/L	2.50	12/5/23 11:27	BKP	EPA 8260D	
Acrylonitrile	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
Benzene	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
Bromobenzene	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
Bromochloromethane	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
Bromodichloromethane	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
Bromoform	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
Bromomethane	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
Carbon disulfide	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
Carbon Tetrachloride	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
Chlorobenzene	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
Chloroethane	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
Chloroform	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
Chloromethane	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
cis-1,2-dichloroethene	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
cis-1,3-Dichloropropene	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
Dibromochloromethane	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
Dibromomethane	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
Dichlorodifluoromethane	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
Ethylbenzene	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
Hexachlorobutadiene	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
Isopropylbenzene	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
m+p-Xylene	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
Methyl ethyl ketone (MEK)	ND	ug/L	2.50	12/5/23 11:27	BKP	EPA 8260D	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.50	12/5/23 11:27	BKP	EPA 8260D	
Methylene chloride	ND	ug/L	2.50	12/5/23 11:27	BKP	EPA 8260D	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
Naphthalene	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
n-Butylbenzene	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
n-Propylbenzene	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
o-Xylene	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
p-isopropyltoluene	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
sec-Butylbenzene	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
Styrene	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
tert-Butylbenzene	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
Tetrachloroethene	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
Toluene	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
trans-1,2-Dichloroethene	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
trans-1,3-Dichloropropene	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
Trichloroethene	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
Trichlorofluoromethane	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	
Vinyl Chloride	ND	ug/L	0.500	12/5/23 11:27	BKP	EPA 8260D	

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Sample Location: 04Q23L4MW03BW  
Lab/Sample Number: MDL0022-01 Collect Date: 11/30/23 09:15  
Date Received: 11/29/23 13:04 Collected By: D.Rukki, R.Martin  
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Volatiles (Continued)</b>							
Surrogate: 1,2-Dichlorobenzene-d4	103%		70-130	12/5/23 11:27	BKP	EPA 8260D	
Surrogate: 4-Bromofluorobenzene	100%		70-130	12/5/23 11:27	BKP	EPA 8260D	
Surrogate: Toluene-d8	102%		70-130	12/5/23 11:27	BKP	EPA 8260D	

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Sample Location: 04Q23L4MW03AW  
Lab/Sample Number: MDL0022-02 Collect Date: 11/30/23 09:45  
Date Received: 11/29/23 13:04 Collected By: D.Rukki, R.Martin  
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Inorganics</b>							
Perchlorate	16.1	ug/L	0.500	12/12/23 20:38	GPB	EPA 6850	
<b>Semivolatiles</b>							
1,3,5-TNB	ND	ug/L	0.500	12/27/23 11:21	MER	EPA 8330B	
1,3-Dinitrobenzene	ND	ug/L	0.500	12/27/23 11:21	MER	EPA 8330B	
2,4,6-Trinitrotoluene	ND	ug/L	0.100	12/27/23 11:21	MER	EPA 8330B	
2,4-Dinitrotoluene	ND	ug/L	0.100	12/27/23 11:21	MER	EPA 8330B	
2,6-DNT	ND	ug/L	0.500	12/27/23 11:21	MER	EPA 8330B	
2-Amino-4,6-dinitrotoluene	ND	ug/L	0.500	12/27/23 11:21	MER	EPA 8330B	
2-Nitrotoluene	ND	ug/L	0.500	12/27/23 11:21	MER	EPA 8330B	
3-Nitrotoluene	ND	ug/L	0.500	12/27/23 11:21	MER	EPA 8330B	
4-Amino-2,6-dinitrotoluene	ND	ug/L	0.500	12/27/23 11:21	MER	EPA 8330B	
4-Nitrotoluene	ND	ug/L	0.500	12/27/23 11:21	MER	EPA 8330B	
HMX	0.202	ug/L	0.100	12/27/23 11:21	MER	EPA 8330B	
NB	ND	ug/L	0.500	12/27/23 11:21	MER	EPA 8330B	
RDX	4.38	ug/L	0.100	12/27/23 11:21	MER	EPA 8330B	
Tetryl	ND	ug/L	0.500	12/27/23 11:21	MER	EPA 8330B	
<hr/>							
<i>Surrogate: 1,2-Dinitrobenzene</i>	<i>88.8%</i>		<i>70-130</i>	<i>12/27/23 11:21</i>	<i>MER</i>	<i>EPA 8330B</i>	
<b>Volatiles</b>							
1,1,1,2-Tetrachloroethane	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
1,1,1-Trichloroethane	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
1,1,2-Trichloroethane	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
1,1-Dichloroethane	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
1,1-Dichloroethene	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
1,1-dichloropropene	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
1,2,3-Trichlorobenzene	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
1,2,3-Trichloropropane	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
1,2,4-Trichlorobenzene	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
1,2,4-Trimethylbenzene	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
1,2-Dibromo-3-chloropropane (DBCP)	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
1,2-Dichlorobenzene	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
1,2-Dichloroethane	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
1,2-Dichloropropane	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
1,3,5-Trimethylbenzene	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
1,3-Dichlorobenzene	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
1,3-Dichloropropane	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
1,4-Dichlorobenzene	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
2,2-Dichloropropane	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
2-Chlorotoluene	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
2-hexanone	ND	ug/L	2.50	12/5/23 11:56	BKP	EPA 8260D	
4-Chlorotoluene	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
Acetone	ND	ug/L	2.50	12/5/23 11:56	BKP	EPA 8260D	
Acrylonitrile	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
Benzene	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
Bromobenzene	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	

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Sample Location: 04Q23L4MW03AW  
Lab/Sample Number: MDL0022-02 Collect Date: 11/30/23 09:45  
Date Received: 11/29/23 13:04 Collected By: D.Rukki, R.Martin  
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Volatiles (Continued)</b>							
Bromochloromethane	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
Bromodichloromethane	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
Bromoform	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
Bromomethane	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
Carbon disulfide	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
Carbon Tetrachloride	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
Chlorobenzene	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
Chloroethane	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
Chloroform	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
Chloromethane	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
cis-1,2-dichloroethene	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
cis-1,3-Dichloropropene	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
Dibromochloromethane	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
Dibromomethane	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
Dichlorodifluoromethane	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
Ethylbenzene	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
Hexachlorobutadiene	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
Isopropylbenzene	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
m+p-Xylene	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
Methyl ethyl ketone (MEK)	ND	ug/L	2.50	12/5/23 11:56	BKP	EPA 8260D	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.50	12/5/23 11:56	BKP	EPA 8260D	
Methylene chloride	ND	ug/L	2.50	12/5/23 11:56	BKP	EPA 8260D	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
Naphthalene	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
n-Butylbenzene	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
n-Propylbenzene	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
o-Xylene	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
p-isopropyltoluene	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
sec-Butylbenzene	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
Styrene	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
tert-Butylbenzene	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
Tetrachloroethene	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
Toluene	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
trans-1,2-Dichloroethene	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
trans-1,3-Dichloropropene	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
Trichloroethene	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
Trichlorofluoromethane	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
Vinyl Chloride	ND	ug/L	0.500	12/5/23 11:56	BKP	EPA 8260D	
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Surrogate: 1,2-Dichlorobenzene-d4	103%		70-130	12/5/23 11:56	BKP	EPA 8260D	
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Surrogate: 4-Bromofluorobenzene	99.1%		70-130	12/5/23 11:56	BKP	EPA 8260D	
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Surrogate: Toluene-d8	103%		70-130	12/5/23 11:56	BKP	EPA 8260D	
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Sample Location: 04Q23L4MW02AW  
 Lab/Sample Number: MDL0022-03 Collect Date: 11/30/23 10:35  
 Date Received: 11/29/23 13:04 Collected By: D.Rukki, R.Martin  
 Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Inorganics</b>							
Perchlorate	174	ug/L	25.0	12/12/23 10:31	GPB	EPA 6850	
<b>Semivolatiles</b>							
1,3,5-TNB	ND	ug/L	0.500	12/27/23 11:59	MER	EPA 8330B	
1,3-Dinitrobenzene	ND	ug/L	0.500	12/27/23 11:59	MER	EPA 8330B	
2,4,6-Trinitrotoluene	ND	ug/L	0.100	12/27/23 11:59	MER	EPA 8330B	
2,4-Dinitrotoluene	ND	ug/L	0.100	12/27/23 11:59	MER	EPA 8330B	
2,6-DNT	ND	ug/L	0.500	12/27/23 11:59	MER	EPA 8330B	
2-Amino-4,6-dinitrotoluene	ND	ug/L	0.500	12/27/23 11:59	MER	EPA 8330B	
2-Nitrotoluene	ND	ug/L	0.500	12/27/23 11:59	MER	EPA 8330B	
3-Nitrotoluene	ND	ug/L	0.500	12/27/23 11:59	MER	EPA 8330B	
4-Amino-2,6-dinitrotoluene	ND	ug/L	0.500	12/27/23 11:59	MER	EPA 8330B	
4-Nitrotoluene	ND	ug/L	0.500	12/27/23 11:59	MER	EPA 8330B	
HMX	2.49	ug/L	0.100	12/27/23 11:59	MER	EPA 8330B	
NB	ND	ug/L	0.500	12/27/23 11:59	MER	EPA 8330B	
RDX	6.20	ug/L	0.100	12/27/23 11:59	MER	EPA 8330B	
Tetryl	ND	ug/L	0.500	12/27/23 11:59	MER	EPA 8330B	
<i>Surrogate: 1,2-Dinitrobenzene</i>	<i>86.8%</i>		<i>70-130</i>	<i>12/27/23 11:59</i>	<i>MER</i>	<i>EPA 8330B</i>	
<b>Volatiles</b>							
1,1,1,2-Tetrachloroethane	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
1,1,1-Trichloroethane	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
1,1,2-Trichloroethane	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
1,1-Dichloroethane	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
1,1-Dichloroethene	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
1,1-dichloropropene	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
1,2,3-Trichlorobenzene	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
1,2,3-Trichloropropane	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
1,2,4-Trichlorobenzene	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
1,2,4-Trimethylbenzene	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
1,2-Dibromo-3-chloropropane (DBCP)	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
1,2-Dichlorobenzene	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
1,2-Dichloroethane	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
1,2-Dichloropropane	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
1,3,5-Trimethylbenzene	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
1,3-Dichlorobenzene	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
1,3-Dichloropropane	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
1,4-Dichlorobenzene	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
2,2-Dichloropropane	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
2-Chlorotoluene	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
2-hexanone	ND	ug/L	2.50	12/5/23 12:26	BKP	EPA 8260D	
4-Chlorotoluene	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
Acetone	ND	ug/L	2.50	12/5/23 12:26	BKP	EPA 8260D	
Acrylonitrile	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
Benzene	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
Bromobenzene	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	

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Sample Location: 04Q23L4MW02AW  
Lab/Sample Number: MDL0022-03 Collect Date: 11/30/23 10:35  
Date Received: 11/29/23 13:04 Collected By: D.Rukki, R.Martin  
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Volatiles (Continued)</b>							
Bromochloromethane	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
Bromodichloromethane	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
Bromoform	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
Bromomethane	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
Carbon disulfide	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
Carbon Tetrachloride	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
Chlorobenzene	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
Chloroethane	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
Chloroform	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
Chloromethane	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
cis-1,2-dichloroethene	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
cis-1,3-Dichloropropene	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
Dibromochloromethane	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
Dibromomethane	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
Dichlorodifluoromethane	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
Ethylbenzene	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
Hexachlorobutadiene	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
Isopropylbenzene	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
m+p-Xylene	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
Methyl ethyl ketone (MEK)	ND	ug/L	2.50	12/5/23 12:26	BKP	EPA 8260D	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.50	12/5/23 12:26	BKP	EPA 8260D	
Methylene chloride	ND	ug/L	2.50	12/5/23 12:26	BKP	EPA 8260D	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
Naphthalene	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
n-Butylbenzene	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
n-Propylbenzene	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
o-Xylene	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
p-isopropyltoluene	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
sec-Butylbenzene	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
Styrene	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
tert-Butylbenzene	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
Tetrachloroethene	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
Toluene	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
trans-1,2-Dichloroethene	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
trans-1,3-Dichloropropene	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
Trichloroethene	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
Trichlorofluoromethane	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
Vinyl Chloride	ND	ug/L	0.500	12/5/23 12:26	BKP	EPA 8260D	
<hr/>							
Surrogate: 1,2-Dichlorobenzene-d4	102%		70-130	12/5/23 12:26	BKP	EPA 8260D	
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Surrogate: 4-Bromofluorobenzene	98.8%		70-130	12/5/23 12:26	BKP	EPA 8260D	
<hr/>							
Surrogate: Toluene-d8	102%		70-130	12/5/23 12:26	BKP	EPA 8260D	

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 504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email [spokane@anateklabs.com](mailto:spokane@anateklabs.com)

Sample Location: 04Q23L4MW02BW  
 Lab/Sample Number: MDL0022-04 Collect Date: 11/30/23 12:10  
 Date Received: 11/29/23 13:04 Collected By: D.Rukki, R.Martin  
 Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Inorganics</b>							
Perchlorate	307	ug/L	25.0	12/12/23 10:38	GPB	EPA 6850	
<b>Semivolatiles</b>							
1,3,5-TNB	ND	ug/L	0.500	12/27/23 12:36	MER	EPA 8330B	
1,3-Dinitrobenzene	ND	ug/L	0.500	12/27/23 12:36	MER	EPA 8330B	
2,4,6-Trinitrotoluene	0.152	ug/L	0.100	12/27/23 12:36	MER	EPA 8330B	
2,4-Dinitrotoluene	0.336	ug/L	0.100	12/27/23 12:36	MER	EPA 8330B	
2,6-DNT	ND	ug/L	0.500	12/27/23 12:36	MER	EPA 8330B	
2-Amino-4,6-dinitrotoluene	ND	ug/L	0.500	12/27/23 12:36	MER	EPA 8330B	
2-Nitrotoluene	ND	ug/L	0.500	12/27/23 12:36	MER	EPA 8330B	
3-Nitrotoluene	ND	ug/L	0.500	12/27/23 12:36	MER	EPA 8330B	
4-Amino-2,6-dinitrotoluene	ND	ug/L	0.500	12/27/23 12:36	MER	EPA 8330B	
4-Nitrotoluene	ND	ug/L	0.500	12/27/23 12:36	MER	EPA 8330B	
HMX	5.32	ug/L	0.100	12/27/23 12:36	MER	EPA 8330B	
NB	ND	ug/L	0.500	12/27/23 12:36	MER	EPA 8330B	
RDX	24.1	ug/L	0.100	12/27/23 12:36	MER	EPA 8330B	
Tetryl	ND	ug/L	0.500	12/27/23 12:36	MER	EPA 8330B	
<i>Surrogate: 1,2-Dinitrobenzene</i>							
	91.5%		70-130	12/27/23 12:36	MER	EPA 8330B	
<b>Volatiles</b>							
1,1,1,2-Tetrachloroethane	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
1,1,1-Trichloroethane	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
1,1,2-Trichloroethane	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
1,1-Dichloroethane	0.570	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
1,1-Dichloroethene	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
1,1-dichloropropene	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
1,2,3-Trichlorobenzene	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
1,2,3-Trichloropropane	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
1,2,4-Trichlorobenzene	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
1,2,4-Trimethylbenzene	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
1,2-Dibromo-3-chloropropane (DBCP)	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
1,2-Dichlorobenzene	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
1,2-Dichloroethane	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
1,2-Dichloropropane	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
1,3,5-Trimethylbenzene	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
1,3-Dichlorobenzene	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
1,3-Dichloropropane	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
1,4-Dichlorobenzene	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
2,2-Dichloropropane	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
2-Chlorotoluene	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
2-hexanone	ND	ug/L	2.50	12/5/23 12:56	BKP	EPA 8260D	
4-Chlorotoluene	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
Acetone	ND	ug/L	2.50	12/5/23 12:56	BKP	EPA 8260D	
Acrylonitrile	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
Benzene	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
Bromobenzene	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	

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504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email [spokane@anateklabs.com](mailto:spokane@anateklabs.com)

Sample Location: 04Q23L4MW02BW  
Lab/Sample Number: MDL0022-04 Collect Date: 11/30/23 12:10  
Date Received: 11/29/23 13:04 Collected By: D.Rukki, R.Martin  
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Volatiles (Continued)</b>							
Bromochloromethane	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
Bromodichloromethane	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
Bromoform	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
Bromomethane	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
Carbon disulfide	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
Carbon Tetrachloride	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
Chlorobenzene	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
Chloroethane	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
Chloroform	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
Chloromethane	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
cis-1,2-dichloroethene	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
cis-1,3-Dichloropropene	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
Dibromochloromethane	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
Dibromomethane	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
Dichlorodifluoromethane	1.31	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
Ethylbenzene	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
Hexachlorobutadiene	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
Isopropylbenzene	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
m+p-Xylene	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
Methyl ethyl ketone (MEK)	ND	ug/L	2.50	12/5/23 12:56	BKP	EPA 8260D	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.50	12/5/23 12:56	BKP	EPA 8260D	
Methylene chloride	ND	ug/L	2.50	12/5/23 12:56	BKP	EPA 8260D	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
Naphthalene	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
n-Butylbenzene	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
n-Propylbenzene	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
o-Xylene	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
p-isopropyltoluene	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
sec-Butylbenzene	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
Styrene	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
tert-Butylbenzene	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
Tetrachloroethene	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
Toluene	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
trans-1,2-Dichloroethene	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
trans-1,3-Dichloropropene	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
Trichloroethene	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
Trichlorofluoromethane	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
Vinyl Chloride	ND	ug/L	0.500	12/5/23 12:56	BKP	EPA 8260D	
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<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>103%</i>		<i>70-130</i>	<i>12/5/23 12:56</i>	<i>BKP</i>	<i>EPA 8260D</i>	
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<i>Surrogate: 4-Bromofluorobenzene</i>	<i>100%</i>		<i>70-130</i>	<i>12/5/23 12:56</i>	<i>BKP</i>	<i>EPA 8260D</i>	
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<i>Surrogate: Toluene-d8</i>	<i>102%</i>		<i>70-130</i>	<i>12/5/23 12:56</i>	<i>BKP</i>	<i>EPA 8260D</i>	

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504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

Sample Location: 04Q23L4MW11BW  
Lab/Sample Number: MDL0022-05 Collect Date: 11/30/23 13:45  
Date Received: 11/29/23 13:04 Collected By: D.Rukki, R.Martin  
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Inorganics</b>							
Perchlorate	575	ug/L	25.0	12/12/23 10:46	GPB	EPA 6850	
<b>Semivolatiles</b>							
1,3,5-TNB	ND	ug/L	0.500	12/27/23 13:14	MER	EPA 8330B	
1,3-Dinitrobenzene	ND	ug/L	0.500	12/27/23 13:14	MER	EPA 8330B	
2,4,6-Trinitrotoluene	ND	ug/L	0.100	12/27/23 13:14	MER	EPA 8330B	
2,4-Dinitrotoluene	ND	ug/L	0.100	12/27/23 13:14	MER	EPA 8330B	
2,6-DNT	ND	ug/L	0.500	12/27/23 13:14	MER	EPA 8330B	
2-Amino-4,6-dinitrotoluene	ND	ug/L	0.500	12/27/23 13:14	MER	EPA 8330B	
2-Nitrotoluene	ND	ug/L	0.500	12/27/23 13:14	MER	EPA 8330B	
3-Nitrotoluene	ND	ug/L	0.500	12/27/23 13:14	MER	EPA 8330B	
4-Amino-2,6-dinitrotoluene	ND	ug/L	0.500	12/27/23 13:14	MER	EPA 8330B	
4-Nitrotoluene	ND	ug/L	0.500	12/27/23 13:14	MER	EPA 8330B	
HMX	ND	ug/L	0.100	12/27/23 13:14	MER	EPA 8330B	
NB	ND	ug/L	0.500	12/27/23 13:14	MER	EPA 8330B	
RDX	65.2	ug/L	0.100	12/27/23 13:14	MER	EPA 8330B	
Tetryl	ND	ug/L	0.500	12/27/23 13:14	MER	EPA 8330B	
<hr/>							
<i>Surrogate: 1,2-Dinitrobenzene</i>	<i>86.4%</i>		<i>70-130</i>	<i>12/27/23 13:14</i>	<i>MER</i>	<i>EPA 8330B</i>	
<b>Volatiles</b>							
1,1,1,2-Tetrachloroethane	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
1,1,1-Trichloroethane	1.60	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
1,1,2-Trichloroethane	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
1,1-Dichloroethane	4.03	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
1,1-Dichloroethene	2.08	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
1,1-dichloropropene	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
1,2,3-Trichlorobenzene	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
1,2,3-Trichloropropane	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
1,2,4-Trichlorobenzene	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
1,2,4-Trimethylbenzene	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
1,2-Dibromo-3-chloropropane (DBCP)	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
1,2-Dichlorobenzene	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
1,2-Dichloroethane	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
1,2-Dichloropropane	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
1,3,5-Trimethylbenzene	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
1,3-Dichlorobenzene	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
1,3-Dichloropropane	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
1,4-Dichlorobenzene	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
2,2-Dichloropropane	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
2-Chlorotoluene	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
2-hexanone	ND	ug/L	2.50	12/5/23 13:25	BKP	EPA 8260D	
4-Chlorotoluene	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
Acetone	ND	ug/L	2.50	12/5/23 13:25	BKP	EPA 8260D	
Acrylonitrile	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
Benzene	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
Bromobenzene	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	

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Sample Location: 04Q23L4MW11BW  
Lab/Sample Number: MDL0022-05 Collect Date: 11/30/23 13:45  
Date Received: 11/29/23 13:04 Collected By: D.Rukki, R.Martin  
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Volatiles (Continued)</b>							
Bromochloromethane	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
Bromodichloromethane	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
Bromoform	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
Bromomethane	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
Carbon disulfide	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
Carbon Tetrachloride	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
Chlorobenzene	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
Chloroethane	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
Chloroform	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
Chloromethane	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
cis-1,2-dichloroethene	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
cis-1,3-Dichloropropene	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
Dibromochloromethane	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
Dibromomethane	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
Dichlorodifluoromethane	10.2	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
Ethylbenzene	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
Hexachlorobutadiene	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
Isopropylbenzene	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
m+p-Xylene	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
Methyl ethyl ketone (MEK)	ND	ug/L	2.50	12/5/23 13:25	BKP	EPA 8260D	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.50	12/5/23 13:25	BKP	EPA 8260D	
Methylene chloride	ND	ug/L	2.50	12/5/23 13:25	BKP	EPA 8260D	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
Naphthalene	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
n-Butylbenzene	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
n-Propylbenzene	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
o-Xylene	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
p-isopropyltoluene	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
sec-Butylbenzene	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
Styrene	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
tert-Butylbenzene	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
Tetrachloroethene	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
Toluene	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
trans-1,2-Dichloroethene	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
trans-1,3-Dichloropropene	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
Trichloroethene	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
Trichlorofluoromethane	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
Vinyl Chloride	ND	ug/L	0.500	12/5/23 13:25	BKP	EPA 8260D	
<hr/>							
Surrogate: 1,2-Dichlorobenzene-d4	104%		70-130	12/5/23 13:25	BKP	EPA 8260D	
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Surrogate: 4-Bromofluorobenzene	100%		70-130	12/5/23 13:25	BKP	EPA 8260D	
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Surrogate: Toluene-d8	102%		70-130	12/5/23 13:25	BKP	EPA 8260D	

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Sample Location: 04Q23L4MW145W  
Lab/Sample Number: MDL0022-06 Collect Date: 11/30/23 07:45  
Date Received: 11/29/23 13:04 Collected By: D.Rukki, R.Martin  
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Inorganics</b>							
Perchlorate	173	ug/L	25.0	12/12/23 10:53	GPB	EPA 6850	
<b>Semivolatiles</b>							
1,3,5-TNB	ND	ug/L	0.500	12/27/23 13:51	MER	EPA 8330B	
1,3-Dinitrobenzene	ND	ug/L	0.500	12/27/23 13:51	MER	EPA 8330B	
2,4,6-Trinitrotoluene	ND	ug/L	0.100	12/27/23 13:51	MER	EPA 8330B	
2,4-Dinitrotoluene	ND	ug/L	0.100	12/27/23 13:51	MER	EPA 8330B	
2,6-DNT	ND	ug/L	0.500	12/27/23 13:51	MER	EPA 8330B	
2-Amino-4,6-dinitrotoluene	ND	ug/L	0.500	12/27/23 13:51	MER	EPA 8330B	
2-Nitrotoluene	ND	ug/L	0.500	12/27/23 13:51	MER	EPA 8330B	
3-Nitrotoluene	ND	ug/L	0.500	12/27/23 13:51	MER	EPA 8330B	
4-Amino-2,6-dinitrotoluene	ND	ug/L	0.500	12/27/23 13:51	MER	EPA 8330B	
4-Nitrotoluene	ND	ug/L	0.500	12/27/23 13:51	MER	EPA 8330B	
HMX	2.43	ug/L	0.100	12/27/23 13:51	MER	EPA 8330B	
NB	ND	ug/L	0.500	12/27/23 13:51	MER	EPA 8330B	
RDX	6.10	ug/L	0.100	12/27/23 13:51	MER	EPA 8330B	
Tetryl	ND	ug/L	0.500	12/27/23 13:51	MER	EPA 8330B	
<hr/>							
<i>Surrogate: 1,2-Dinitrobenzene</i>	<i>91.5%</i>		<i>70-130</i>	<i>12/27/23 13:51</i>	<i>MER</i>	<i>EPA 8330B</i>	
<b>Volatiles</b>							
1,1,1,2-Tetrachloroethane	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
1,1,1-Trichloroethane	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
1,1,2-Trichloroethane	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
1,1-Dichloroethane	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
1,1-Dichloroethene	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
1,1-dichloropropene	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
1,2,3-Trichlorobenzene	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
1,2,3-Trichloropropane	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
1,2,4-Trichlorobenzene	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
1,2,4-Trimethylbenzene	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
1,2-Dibromo-3-chloropropane (DBCP)	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
1,2-Dichlorobenzene	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
1,2-Dichloroethane	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
1,2-Dichloropropane	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
1,3,5-Trimethylbenzene	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
1,3-Dichlorobenzene	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
1,3-Dichloropropane	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
1,4-Dichlorobenzene	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
2,2-Dichloropropane	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
2-Chlorotoluene	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
2-hexanone	ND	ug/L	2.50	12/5/23 13:55	BKP	EPA 8260D	
4-Chlorotoluene	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
Acetone	ND	ug/L	2.50	12/5/23 13:55	BKP	EPA 8260D	
Acrylonitrile	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
Benzene	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
Bromobenzene	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	

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Sample Location: 04Q23L4MW145W  
Lab/Sample Number: MDL0022-06 Collect Date: 11/30/23 07:45  
Date Received: 11/29/23 13:04 Collected By: D.Rukki, R.Martin  
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Volatiles (Continued)</b>							
Bromochloromethane	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
Bromodichloromethane	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
Bromoform	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
Bromomethane	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
Carbon disulfide	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
Carbon Tetrachloride	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
Chlorobenzene	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
Chloroethane	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
Chloroform	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
Chloromethane	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
cis-1,2-dichloroethene	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
cis-1,3-Dichloropropene	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
Dibromochloromethane	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
Dibromomethane	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
Dichlorodifluoromethane	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
Ethylbenzene	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
Hexachlorobutadiene	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
Isopropylbenzene	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
m+p-Xylene	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
Methyl ethyl ketone (MEK)	ND	ug/L	2.50	12/5/23 13:55	BKP	EPA 8260D	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.50	12/5/23 13:55	BKP	EPA 8260D	
Methylene chloride	ND	ug/L	2.50	12/5/23 13:55	BKP	EPA 8260D	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
Naphthalene	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
n-Butylbenzene	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
n-Propylbenzene	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
o-Xylene	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
p-isopropyltoluene	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
sec-Butylbenzene	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
Styrene	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
tert-Butylbenzene	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
Tetrachloroethene	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
Toluene	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
trans-1,2-Dichloroethene	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
trans-1,3-Dichloropropene	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
Trichloroethene	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
Trichlorofluoromethane	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
Vinyl Chloride	ND	ug/L	0.500	12/5/23 13:55	BKP	EPA 8260D	
<hr/>							
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>103%</i>		<i>70-130</i>	<i>12/5/23 13:55</i>	<i>BKP</i>	<i>EPA 8260D</i>	
<hr/>							
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>99.1%</i>		<i>70-130</i>	<i>12/5/23 13:55</i>	<i>BKP</i>	<i>EPA 8260D</i>	
<hr/>							
<i>Surrogate: Toluene-d8</i>	<i>102%</i>		<i>70-130</i>	<i>12/5/23 13:55</i>	<i>BKP</i>	<i>EPA 8260D</i>	

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Sample Location: 04Q23L4MW150W  
 Lab/Sample Number: MDL0022-07 Collect Date: 11/30/23 08:30  
 Date Received: 11/29/23 13:04 Collected By: D.Rukki, R.Martin  
 Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Inorganics</b>							
Perchlorate	309	ug/L	25.0	12/12/23 11:00	GPB	EPA 6850	
<b>Semivolatiles</b>							
1,3,5-TNB	ND	ug/L	0.500	12/27/23 15:06	MER	EPA 8330B	
1,3-Dinitrobenzene	ND	ug/L	0.500	12/27/23 15:06	MER	EPA 8330B	
2,4,6-Trinitrotoluene	0.145	ug/L	0.100	12/27/23 15:06	MER	EPA 8330B	
2,4-Dinitrotoluene	0.321	ug/L	0.100	12/27/23 15:06	MER	EPA 8330B	
2,6-DNT	ND	ug/L	0.500	12/27/23 15:06	MER	EPA 8330B	
2-Amino-4,6-dinitrotoluene	ND	ug/L	0.500	12/27/23 15:06	MER	EPA 8330B	
2-Nitrotoluene	ND	ug/L	0.500	12/27/23 15:06	MER	EPA 8330B	
3-Nitrotoluene	ND	ug/L	0.500	12/27/23 15:06	MER	EPA 8330B	
4-Amino-2,6-dinitrotoluene	ND	ug/L	0.500	12/27/23 15:06	MER	EPA 8330B	
4-Nitrotoluene	ND	ug/L	0.500	12/27/23 15:06	MER	EPA 8330B	
HMX	5.08	ug/L	0.100	12/27/23 15:06	MER	EPA 8330B	
NB	ND	ug/L	0.500	12/27/23 15:06	MER	EPA 8330B	
RDX	23.4	ug/L	0.100	12/27/23 15:06	MER	EPA 8330B	
Tetryl	ND	ug/L	0.500	12/27/23 15:06	MER	EPA 8330B	
<i>Surrogate: 1,2-Dinitrobenzene 84.9% 70-130 12/27/23 15:06 MER EPA 8330B</i>							
<b>Volatiles</b>							
1,1,1,2-Tetrachloroethane	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
1,1,1-Trichloroethane	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
1,1,2-Trichloroethane	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
1,1-Dichloroethane	0.580	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
1,1-Dichloroethene	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
1,1-dichloropropene	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
1,2,3-Trichlorobenzene	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
1,2,3-Trichloropropane	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
1,2,4-Trichlorobenzene	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
1,2,4-Trimethylbenzene	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
1,2-Dibromo-3-chloropropane (DBCP)	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
1,2-Dichlorobenzene	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
1,2-Dichloroethane	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
1,2-Dichloropropane	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
1,3,5-Trimethylbenzene	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
1,3-Dichlorobenzene	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
1,3-Dichloropropane	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
1,4-Dichlorobenzene	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
2,2-Dichloropropane	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
2-Chlorotoluene	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
2-hexanone	ND	ug/L	2.50	12/5/23 14:24	BKP	EPA 8260D	
4-Chlorotoluene	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
Acetone	ND	ug/L	2.50	12/5/23 14:24	BKP	EPA 8260D	
Acrylonitrile	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
Benzene	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
Bromobenzene	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	

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Sample Location: 04Q23L4MW150W  
Lab/Sample Number: MDL0022-07 Collect Date: 11/30/23 08:30  
Date Received: 11/29/23 13:04 Collected By: D.Rukki, R.Martin  
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Volatiles (Continued)</b>							
Bromochloromethane	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
Bromodichloromethane	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
Bromoform	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
Bromomethane	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
Carbon disulfide	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
Carbon Tetrachloride	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
Chlorobenzene	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
Chloroethane	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
Chloroform	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
Chloromethane	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
cis-1,2-dichloroethene	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
cis-1,3-Dichloropropene	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
Dibromochloromethane	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
Dibromomethane	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
Dichlorodifluoromethane	1.30	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
Ethylbenzene	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
Hexachlorobutadiene	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
Isopropylbenzene	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
m+p-Xylene	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
Methyl ethyl ketone (MEK)	ND	ug/L	2.50	12/5/23 14:24	BKP	EPA 8260D	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.50	12/5/23 14:24	BKP	EPA 8260D	
Methylene chloride	ND	ug/L	2.50	12/5/23 14:24	BKP	EPA 8260D	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
Naphthalene	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
n-Butylbenzene	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
n-Propylbenzene	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
o-Xylene	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
p-isopropyltoluene	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
sec-Butylbenzene	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
Styrene	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
tert-Butylbenzene	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
Tetrachloroethene	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
Toluene	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
trans-1,2-Dichloroethene	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
trans-1,3-Dichloropropene	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
Trichloroethene	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
Trichlorofluoromethane	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
Vinyl Chloride	ND	ug/L	0.500	12/5/23 14:24	BKP	EPA 8260D	
<hr/>							
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>103%</i>		<i>70-130</i>	<i>12/5/23 14:24</i>	<i>BKP</i>	<i>EPA 8260D</i>	
<hr/>							
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>99.2%</i>		<i>70-130</i>	<i>12/5/23 14:24</i>	<i>BKP</i>	<i>EPA 8260D</i>	
<hr/>							
<i>Surrogate: Toluene-d8</i>	<i>103%</i>		<i>70-130</i>	<i>12/5/23 14:24</i>	<i>BKP</i>	<i>EPA 8260D</i>	

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504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

Sample Location: 113023TB  
Lab/Sample Number: MDL0022-08      Collect Date: 11/30/23 00:00  
Date Received: 11/29/23 13:04      Collected By:  
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Volatiles</b>							
1,1,1,2-Tetrachloroethane	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
1,1,1-Trichloroethane	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
1,1,2-Trichloroethane	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
1,1-Dichloroethane	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
1,1-Dichloroethene	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
1,1-dichloropropene	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
1,2,3-Trichlorobenzene	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
1,2,3-Trichloropropane	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
1,2,4-Trichlorobenzene	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
1,2,4-Trimethylbenzene	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
1,2-Dibromo-3-chloropropane (DBCP)	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	ug/L	0.200	12/5/23 15:52	BKP	EPA 8260D	
1,2-Dichlorobenzene	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
1,2-Dichloroethane	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
1,2-Dichloropropane	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
1,3,5-Trimethylbenzene	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
1,3-Dichlorobenzene	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
1,3-Dichloropropane	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
1,4-Dichlorobenzene	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
2,2-Dichloropropane	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
2-Chloroethyl vinyl ether	ND	ug/L	2.50	12/5/23 15:52	BKP	EPA 8260D	
2-Chlorotoluene	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
2-hexanone	ND	ug/L	2.50	12/5/23 15:52	BKP	EPA 8260D	
4-Chlorotoluene	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
Acetone	ND	ug/L	2.50	12/5/23 15:52	BKP	EPA 8260D	
Acrolein	ND	ug/L	2.50	12/5/23 15:52	BKP	EPA 8260D	
Acrylonitrile	ND	ug/L	2.50	12/5/23 15:52	BKP	EPA 8260D	
Benzene	ND	ug/L	0.200	12/5/23 15:52	BKP	EPA 8260D	
Bromobenzene	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
Bromochloromethane	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
Bromodichloromethane	ND	ug/L	0.200	12/5/23 15:52	BKP	EPA 8260D	
Bromoform	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
Bromomethane	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
Carbon disulfide	ND	ug/L	2.50	12/5/23 15:52	BKP	EPA 8260D	
Carbon Tetrachloride	ND	ug/L	0.200	12/5/23 15:52	BKP	EPA 8260D	
Chlorobenzene	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
Chloroethane	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
Chloroform	ND	ug/L	0.200	12/5/23 15:52	BKP	EPA 8260D	
Chloromethane	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
cis-1,2-dichloroethene	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
cis-1,3-Dichloropropene	ND	ug/L	0.200	12/5/23 15:52	BKP	EPA 8260D	
Dibromochloromethane	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
Dibromomethane	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
Dichlorodifluoromethane	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
Ethylbenzene	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
Hexachlorobutadiene	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
Isopropylbenzene	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	

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1282 Alturas Drive - Moscow, ID 83843 - (208) 883-2839 - email moscow@anateklabs.com  
504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

Sample Location: 113023TB  
Lab/Sample Number: MDL0022-08 Collect Date: 11/30/23 00:00  
Date Received: 11/29/23 13:04 Collected By:  
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Volatiles (Continued)</b>							
m+p-Xylene	ND	ug/L	1.00	12/5/23 15:52	BKP	EPA 8260D	
Methyl ethyl ketone (MEK)	ND	ug/L	2.50	12/5/23 15:52	BKP	EPA 8260D	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.50	12/5/23 15:52	BKP	EPA 8260D	
Methylene chloride	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
Naphthalene	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
n-Butylbenzene	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
n-Propylbenzene	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
o-Xylene	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
p-isopropyltoluene	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
sec-Butylbenzene	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
Styrene	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
tert-Butylbenzene	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
Tetrachloroethene	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
Toluene	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
trans-1,2-Dichloroethene	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
trans-1,3-Dichloropropene	ND	ug/L	0.200	12/5/23 15:52	BKP	EPA 8260D	
trans-1-4-Dichloro-2-butene	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
Trichloroethene	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
Trichlorofluoromethane	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
Vinyl acetate	ND	ug/L	0.500	12/5/23 15:52	BKP	EPA 8260D	
Vinyl Chloride	ND	ug/L	0.200	12/5/23 15:52	BKP	EPA 8260D	
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Surrogate: 1,2-Dichlorobenzene-d4	105%		70-130	12/5/23 15:52	BKP	EPA 8260D	
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Surrogate: 4-Bromofluorobenzene	98.7%		70-130	12/5/23 15:52	BKP	EPA 8260D	
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Surrogate: Toluene-d8	103%		70-130	12/5/23 15:52	BKP	EPA 8260D	

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 504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email [spokane@anateklabs.com](mailto:spokane@anateklabs.com)

Sample Location: 04Q23L4MW10BW  
 Lab/Sample Number: MDL0022-09 Collect Date: 11/30/23 14:45  
 Date Received: 11/29/23 13:04 Collected By: D.Rukki, R.Martin  
 Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Inorganics</b>							
Perchlorate	218	ug/L	25.0	12/12/23 11:15	GPB	EPA 6850	
<b>Semivolatiles</b>							
1,3,5-TNB	ND	ug/L	0.500	12/27/23 15:44	MER	EPA 8330B	
1,3-Dinitrobenzene	ND	ug/L	0.500	12/27/23 15:44	MER	EPA 8330B	
2,4,6-Trinitrotoluene	ND	ug/L	0.100	12/27/23 15:44	MER	EPA 8330B	
2,4-Dinitrotoluene	ND	ug/L	0.100	12/27/23 15:44	MER	EPA 8330B	
2,6-DNT	ND	ug/L	0.500	12/27/23 15:44	MER	EPA 8330B	
2-Amino-4,6-dinitrotoluene	ND	ug/L	0.500	12/27/23 15:44	MER	EPA 8330B	
2-Nitrotoluene	ND	ug/L	0.500	12/27/23 15:44	MER	EPA 8330B	
3-Nitrotoluene	ND	ug/L	0.500	12/27/23 15:44	MER	EPA 8330B	
4-Amino-2,6-dinitrotoluene	ND	ug/L	0.500	12/27/23 15:44	MER	EPA 8330B	
4-Nitrotoluene	ND	ug/L	0.500	12/27/23 15:44	MER	EPA 8330B	
HMX	ND	ug/L	0.100	12/27/23 15:44	MER	EPA 8330B	
NB	ND	ug/L	0.500	12/27/23 15:44	MER	EPA 8330B	
RDX	21.0	ug/L	0.100	12/27/23 15:44	MER	EPA 8330B	
Tetryl	ND	ug/L	0.500	12/27/23 15:44	MER	EPA 8330B	
<hr/>							
<i>Surrogate: 1,2-Dinitrobenzene</i>	<i>88.8%</i>		<i>70-130</i>	<i>12/27/23 15:44</i>	<i>MER</i>	<i>EPA 8330B</i>	
<b>Volatiles</b>							
1,1,1,2-Tetrachloroethane	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
1,1,1-Trichloroethane	2.81	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
1,1,2-Trichloroethane	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
1,1-Dichloroethane	5.72	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
1,1-Dichloroethene	4.76	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
1,1-dichloropropene	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
1,2,3-Trichlorobenzene	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
1,2,3-Trichloropropane	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
1,2,4-Trichlorobenzene	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
1,2,4-Trimethylbenzene	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
1,2-Dibromo-3-chloropropane (DBCP)	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
1,2-Dichlorobenzene	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
1,2-Dichloroethane	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
1,2-Dichloropropane	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
1,3,5-Trimethylbenzene	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
1,3-Dichlorobenzene	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
1,3-Dichloropropane	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
1,4-Dichlorobenzene	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
2,2-Dichloropropane	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
2-Chlorotoluene	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
2-hexanone	ND	ug/L	2.50	12/5/23 14:53	BKP	EPA 8260D	
4-Chlorotoluene	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
Acetone	ND	ug/L	2.50	12/5/23 14:53	BKP	EPA 8260D	
Acrylonitrile	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
Benzene	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
Bromobenzene	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	

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1282 Alturas Drive - Moscow, ID 83843 - (208) 883-2839 - email [moscow@anateklabs.com](mailto:moscow@anateklabs.com)  
504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email [spokane@anateklabs.com](mailto:spokane@anateklabs.com)

Sample Location: 04Q23L4MW10BW  
Lab/Sample Number: MDL0022-09 Collect Date: 11/30/23 14:45  
Date Received: 11/29/23 13:04 Collected By: D.Rukki, R.Martin  
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Volatiles (Continued)</b>							
Bromochloromethane	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
Bromodichloromethane	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
Bromoform	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
Bromomethane	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
Carbon disulfide	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
Carbon Tetrachloride	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
Chlorobenzene	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
Chloroethane	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
Chloroform	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
Chloromethane	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
cis-1,2-dichloroethene	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
cis-1,3-Dichloropropene	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
Dibromochloromethane	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
Dibromomethane	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
Dichlorodifluoromethane	27.2	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
Ethylbenzene	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
Hexachlorobutadiene	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
Isopropylbenzene	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
m+p-Xylene	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
Methyl ethyl ketone (MEK)	ND	ug/L	2.50	12/5/23 14:53	BKP	EPA 8260D	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.50	12/5/23 14:53	BKP	EPA 8260D	
Methylene chloride	ND	ug/L	2.50	12/5/23 14:53	BKP	EPA 8260D	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
Naphthalene	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
n-Butylbenzene	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
n-Propylbenzene	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
o-Xylene	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
p-isopropyltoluene	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
sec-Butylbenzene	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
Styrene	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
tert-Butylbenzene	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
Tetrachloroethene	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
Toluene	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
trans-1,2-Dichloroethene	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
trans-1,3-Dichloropropene	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
Trichloroethene	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
Trichlorofluoromethane	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
Vinyl Chloride	ND	ug/L	0.500	12/5/23 14:53	BKP	EPA 8260D	
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<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>103%</i>		<i>70-130</i>	<i>12/5/23 14:53</i>	<i>BKP</i>	<i>EPA 8260D</i>	
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<i>Surrogate: 4-Bromofluorobenzene</i>	<i>99.4%</i>		<i>70-130</i>	<i>12/5/23 14:53</i>	<i>BKP</i>	<i>EPA 8260D</i>	
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<i>Surrogate: Toluene-d8</i>	<i>102%</i>		<i>70-130</i>	<i>12/5/23 14:53</i>	<i>BKP</i>	<i>EPA 8260D</i>	

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504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

Sample Location: 04Q23L4MW10AW  
Lab/Sample Number: MDL0022-10 Collect Date: 11/30/23 15:50  
Date Received: 11/29/23 13:04 Collected By: D.Rukki, R.Martin  
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Inorganics</b>							
Perchlorate	60.0	ug/L	25.0	12/12/23 11:22	GPB	EPA 6850	
<b>Semivolatiles</b>							
1,3,5-TNB	ND	ug/L	0.500	12/27/23 16:21	MER	EPA 8330B	
1,3-Dinitrobenzene	ND	ug/L	0.500	12/27/23 16:21	MER	EPA 8330B	
2,4,6-Trinitrotoluene	ND	ug/L	0.100	12/27/23 16:21	MER	EPA 8330B	
2,4-Dinitrotoluene	ND	ug/L	0.100	12/27/23 16:21	MER	EPA 8330B	
2,6-DNT	ND	ug/L	0.500	12/27/23 16:21	MER	EPA 8330B	
2-Amino-4,6-dinitrotoluene	ND	ug/L	0.500	12/27/23 16:21	MER	EPA 8330B	
2-Nitrotoluene	ND	ug/L	0.500	12/27/23 16:21	MER	EPA 8330B	
3-Nitrotoluene	ND	ug/L	0.500	12/27/23 16:21	MER	EPA 8330B	
4-Amino-2,6-dinitrotoluene	ND	ug/L	0.500	12/27/23 16:21	MER	EPA 8330B	
4-Nitrotoluene	ND	ug/L	0.500	12/27/23 16:21	MER	EPA 8330B	
HMX	ND	ug/L	0.100	12/27/23 16:21	MER	EPA 8330B	
NB	ND	ug/L	0.500	12/27/23 16:21	MER	EPA 8330B	
RDX	1.21	ug/L	0.100	12/27/23 16:21	MER	EPA 8330B	
Tetryl	ND	ug/L	0.500	12/27/23 16:21	MER	EPA 8330B	
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<i>Surrogate: 1,2-Dinitrobenzene</i>	<i>82.9%</i>		<i>70-130</i>	<i>12/27/23 16:21</i>	<i>MER</i>	<i>EPA 8330B</i>	
<b>Volatiles</b>							
1,1,1,2-Tetrachloroethane	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
1,1,1-Trichloroethane	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
1,1,2-Trichloroethane	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
1,1-Dichloroethane	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
1,1-Dichloroethene	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
1,1-dichloropropene	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
1,2,3-Trichlorobenzene	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
1,2,3-Trichloropropane	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
1,2,4-Trichlorobenzene	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
1,2,4-Trimethylbenzene	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
1,2-Dibromo-3-chloropropane (DBCP)	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
1,2-Dichlorobenzene	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
1,2-Dichloroethane	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
1,2-Dichloropropane	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
1,3,5-Trimethylbenzene	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
1,3-Dichlorobenzene	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
1,3-Dichloropropane	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
1,4-Dichlorobenzene	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
2,2-Dichloropropane	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
2-Chlorotoluene	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
2-hexanone	ND	ug/L	2.50	12/5/23 15:23	BKP	EPA 8260D	
4-Chlorotoluene	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
Acetone	ND	ug/L	2.50	12/5/23 15:23	BKP	EPA 8260D	
Acrylonitrile	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
Benzene	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
Bromobenzene	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	

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Sample Location: 04Q23L4MW10AW  
 Lab/Sample Number: MDL0022-10 Collect Date: 11/30/23 15:50  
 Date Received: 11/29/23 13:04 Collected By: D.Rukki, R.Martin  
 Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Volatiles (Continued)</b>							
Bromochloromethane	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
Bromodichloromethane	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
Bromoform	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
Bromomethane	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
Carbon disulfide	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
Carbon Tetrachloride	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
Chlorobenzene	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
Chloroethane	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
Chloroform	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
Chloromethane	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
cis-1,2-dichloroethene	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
cis-1,3-Dichloropropene	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
Dibromochloromethane	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
Dibromomethane	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
Dichlorodifluoromethane	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
Ethylbenzene	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
Hexachlorobutadiene	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
Isopropylbenzene	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
m+p-Xylene	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
Methyl ethyl ketone (MEK)	ND	ug/L	2.50	12/5/23 15:23	BKP	EPA 8260D	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.50	12/5/23 15:23	BKP	EPA 8260D	
Methylene chloride	ND	ug/L	2.50	12/5/23 15:23	BKP	EPA 8260D	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
Naphthalene	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
n-Butylbenzene	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
n-Propylbenzene	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
o-Xylene	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
p-isopropyltoluene	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
sec-Butylbenzene	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
Styrene	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
tert-Butylbenzene	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
Tetrachloroethene	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
Toluene	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
trans-1,2-Dichloroethene	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
trans-1,3-Dichloropropene	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
Trichloroethene	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
Trichlorofluoromethane	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
Vinyl Chloride	ND	ug/L	0.500	12/5/23 15:23	BKP	EPA 8260D	
<hr/>							
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>103%</i>		<i>70-130</i>	<i>12/5/23 15:23</i>	<i>BKP</i>	<i>EPA 8260D</i>	
<hr/>							
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98.5%</i>		<i>70-130</i>	<i>12/5/23 15:23</i>	<i>BKP</i>	<i>EPA 8260D</i>	
<hr/>							
<i>Surrogate: Toluene-d8</i>	<i>103%</i>		<i>70-130</i>	<i>12/5/23 15:23</i>	<i>BKP</i>	<i>EPA 8260D</i>	

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Authorized Signature,



Justin Doty For Todd Taruscio, Laboratory Manager

PQL	Practical Quantitation Limit
ND	Not Detected
MCL	EPA's Maximum Contaminant Level
Dry	Sample results reported on a dry weight basis
*	Not a state-certified analyte

This report shall not be reproduced except in full, without the written approval of the laboratory  
The results reported related only to the samples indicated.

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## **Certifications**

<b>Code</b>	<b>Description</b>	<b>Facility</b>	<b>Number</b>
DOE WA	Washington Department of Ecology	Anatek-Moscow, ID	C595

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## Quality Control Data

### Inorganics

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0321 - Perchlorate</b>										
<b>Blank (BDL0321-BLK1)</b>										
Perchlorate	ND		0.500	ug/L						
					Prepared: 12/8/2023 Analyzed: 12/11/2023					
<b>Blank (BDL0321-BLK2)</b>										
Perchlorate	ND		0.500	ug/L						
					Prepared: 12/8/2023 Analyzed: 12/12/2023					
<b>LCS (BDL0321-BS1)</b>										
Perchlorate	5.23		0.500	ug/L	5.00		105	80-120		
					Prepared: 12/8/2023 Analyzed: 12/11/2023					
<b>LCS (BDL0321-BS2)</b>										
Perchlorate	4.69		0.500	ug/L	5.00		93.8	80-120		
					Prepared: 12/8/2023 Analyzed: 12/12/2023					
<b>Matrix Spike (BDL0321-MS1)</b>										
Perchlorate	5.20		0.500	ug/L	5.00	ND	104	80-120		
					Prepared: 12/8/2023 Analyzed: 12/11/2023					
<b>Matrix Spike (BDL0321-MS2)</b>										
Perchlorate	324		25.0	ug/L	250	68.0	102	80-120		
					Prepared: 12/8/2023 Analyzed: 12/12/2023					
<b>Matrix Spike Dup (BDL0321-MSD1)</b>										
Perchlorate	5.35		0.500	ug/L	5.00	ND	107	80-120	2.84	20
					Prepared: 12/8/2023 Analyzed: 12/11/2023					
<b>Matrix Spike Dup (BDL0321-MSD2)</b>										
Perchlorate	319		25.0	ug/L	250	68.0	100	80-120	1.56	20
					Prepared: 12/8/2023 Analyzed: 12/12/2023					

## Quality Control Data

### Semivolatiles

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0072 - Explosives</b>										
<b>Blank (BDL0072-BLK1)</b>										
HMX	ND		0.500	ug/L						
RDX	ND		0.500	ug/L						
1,3,5-TNB	ND		0.500	ug/L						
1,3-Dinitrobenzene	ND		0.500	ug/L						
NB	ND		0.500	ug/L						
2,4,6-Trinitrotoluene	ND		0.500	ug/L						
Tetryl	ND		0.500	ug/L						
2,6-DNT	ND		0.500	ug/L						
2,4-Dinitrotoluene	ND		0.500	ug/L						
2-Nitrotoluene	ND		0.500	ug/L						
4-Nitrotoluene	ND		0.500	ug/L						
4-Amino-2,6-dinitrotoluene	ND		0.500	ug/L						
3-Nitrotoluene	ND		0.500	ug/L						
2-Amino-4,6-dinitrotoluene	ND		0.500	ug/L						
<i>Surrogate: 1,2-Dinitrobenzene</i>			9.80	ug/L	10.0		98.0	70-130		
<b>Blank (BDL0072-BLK2)</b>										
HMX	ND		0.500	ug/L						
RDX	ND		0.500	ug/L						
1,3,5-TNB	ND		0.500	ug/L						
					Prepared: 12/5/2023 Analyzed: 12/27/2023					

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## Quality Control Data (Continued)

### Semivolatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0072 - Explosives (Continued)</b>										
<b>Blank (BDL0072-BLK2)</b>				Prepared: 12/5/2023 Analyzed: 12/27/2023						
1,3-Dinitrobenzene	ND		0.500	ug/L						
NB	ND		0.500	ug/L						
2,4,6-Trinitrotoluene	ND		0.500	ug/L						
Tetryl	ND		0.500	ug/L						
2,6-DNT	ND		0.500	ug/L						
2,4-Dinitrotoluene	ND		0.500	ug/L						
2-Nitrotoluene	ND		0.500	ug/L						
4-Nitrotoluene	ND		0.500	ug/L						
4-Amino-2,6-dinitrotoluene	ND		0.500	ug/L						
3-Nitrotoluene	ND		0.500	ug/L						
2-Amino-4,6-dinitrotoluene	ND		0.500	ug/L						
<i>Surrogate: 1,2-Dinitrobenzene</i>			<i>9.59</i>	<i>ug/L</i>	<i>10.0</i>		<i>95.9</i>	<i>70-130</i>		
<b>LCS (BDL0072-BS1)</b>				Prepared: 12/4/2023 Analyzed: 12/26/2023						
HMX	4.63		0.500	ug/L	5.00		92.6	70-130		
RDX	5.12		0.500	ug/L	5.00		102	70-130		
1,3,5-TNB	4.38		0.500	ug/L	5.00		87.7	70-130		
1,3-Dinitrobenzene	4.65		0.500	ug/L	5.00		93.0	70-130		
NB	4.75		0.500	ug/L	5.00		95.1	70-130		
2,4,6-Trinitrotoluene	4.59		0.500	ug/L	5.00		91.9	70-130		
Tetryl	4.34		0.500	ug/L	5.00		86.7	70-130		
2,6-DNT	4.42		0.500	ug/L	5.00		88.4	70-130		
2,4-Dinitrotoluene	4.53		0.500	ug/L	5.00		90.6	70-130		
2-Nitrotoluene	4.68		0.500	ug/L	5.00		93.5	70-130		
4-Nitrotoluene	4.52		0.500	ug/L	5.00		90.4	70-130		
4-Amino-2,6-dinitrotoluene	4.36		0.500	ug/L	5.00		87.3	70-130		
3-Nitrotoluene	4.54		0.500	ug/L	5.00		90.8	70-130		
2-Amino-4,6-dinitrotoluene	4.51		0.500	ug/L	5.00		90.2	70-130		
<i>Surrogate: 1,2-Dinitrobenzene</i>			<i>8.60</i>	<i>ug/L</i>	<i>10.0</i>		<i>86.0</i>	<i>70-130</i>		

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## Quality Control Data (Continued)

### Semivolatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0072 - Explosives (Continued)</b>										
<b>LCS (BDL0072-BS2)</b>				Prepared: 12/5/2023 Analyzed: 12/27/2023						
HMX	4.58		0.500	ug/L	5.00		91.6	70-130		
RDX	4.59		0.500	ug/L	5.00		91.8	70-130		
1,3,5-TNB	4.47		0.500	ug/L	5.00		89.4	70-130		
1,3-Dinitrobenzene	4.65		0.500	ug/L	5.00		92.9	70-130		
NB	4.76		0.500	ug/L	5.00		95.2	70-130		
2,4,6-Trinitrotoluene	4.50		0.500	ug/L	5.00		90.0	70-130		
Tetryl	4.36		0.500	ug/L	5.00		87.1	70-130		
2,6-DNT	4.40		0.500	ug/L	5.00		88.0	70-130		
2,4-Dinitrotoluene	4.52		0.500	ug/L	5.00		90.3	70-130		
2-Nitrotoluene	5.02		0.500	ug/L	5.00		100	70-130		
4-Nitrotoluene	4.59		0.500	ug/L	5.00		91.9	70-130		
4-Amino-2,6-dinitrotoluene	4.77		0.500	ug/L	5.00		95.4	70-130		
3-Nitrotoluene	4.01		0.500	ug/L	5.00		80.3	70-130		
2-Amino-4,6-dinitrotoluene	4.49		0.500	ug/L	5.00		89.7	70-130		
<i>Surrogate: 1,2-Dinitrobenzene</i>			<i>8.31</i>	<i>ug/L</i>	<i>10.0</i>		<i>83.1</i>	<i>70-130</i>		

### Matrix Spike (BDL0072-MS1)

Source: MDK0709-10

Prepared: 12/4/2023 Analyzed: 12/26/2023

HMX	4.31		0.500	ug/L	5.00	ND	86.1	70-130		
RDX	4.74		0.500	ug/L	5.00	ND	94.8	70-130		
1,3,5-TNB	4.13		0.500	ug/L	5.00	ND	82.6	70-130		
1,3-Dinitrobenzene	4.32		0.500	ug/L	5.00	ND	86.4	70-130		
NB	4.41		0.500	ug/L	5.00	ND	88.1	70-130		
2,4,6-Trinitrotoluene	4.27		0.500	ug/L	5.00	ND	85.5	70-130		
Tetryl	4.21		0.500	ug/L	5.00	ND	84.2	70-130		
2,6-DNT	4.56		0.500	ug/L	5.00	ND	91.2	70-130		
2,4-Dinitrotoluene	4.24		0.500	ug/L	5.00	ND	84.8	70-130		
2-Nitrotoluene	4.75		0.500	ug/L	5.00	ND	94.9	70-130		
4-Nitrotoluene	4.61		0.500	ug/L	5.00	ND	92.2	70-130		
4-Amino-2,6-dinitrotoluene	4.36		0.500	ug/L	5.00	ND	87.2	70-130		
3-Nitrotoluene	4.67		0.500	ug/L	5.00	ND	93.3	70-130		
2-Amino-4,6-dinitrotoluene	4.50		0.500	ug/L	5.00	ND	90.1	70-130		
<i>Surrogate: 1,2-Dinitrobenzene</i>			<i>8.56</i>	<i>ug/L</i>	<i>10.0</i>		<i>85.6</i>	<i>70-130</i>		

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## Quality Control Data (Continued)

### Semivolatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0072 - Explosives (Continued)</b>										
<b>Matrix Spike (BDL0072-MS2)</b>			<b>Source: MDK0735-04</b>		Prepared: 12/4/2023		Analyzed: 12/27/2023			
HMX	4.62		0.500	ug/L	5.00	ND	92.3	70-130		
RDX	4.92		0.500	ug/L	5.00	ND	98.5	70-130		
1,3,5-TNB	4.46		0.500	ug/L	5.00	ND	89.3	70-130		
1,3-Dinitrobenzene	4.69		0.500	ug/L	5.00	ND	93.8	70-130		
NB	4.79		0.500	ug/L	5.00	ND	95.8	70-130		
2,4,6-Trinitrotoluene	4.57		0.500	ug/L	5.00	ND	91.4	70-130		
Tetryl	4.23		0.500	ug/L	5.00	ND	84.7	70-130		
2,6-DNT	4.42		0.500	ug/L	5.00	ND	88.4	70-130		
2,4-Dinitrotoluene	4.52		0.500	ug/L	5.00	ND	90.5	70-130		
2-Nitrotoluene	4.71		0.500	ug/L	5.00	ND	94.2	70-130		
4-Nitrotoluene	4.53		0.500	ug/L	5.00	ND	90.7	70-130		
4-Amino-2,6-dinitrotoluene	4.44		0.500	ug/L	5.00	ND	88.9	70-130		
3-Nitrotoluene	4.39		0.500	ug/L	5.00	ND	87.7	70-130		
2-Amino-4,6-dinitrotoluene	4.56		0.500	ug/L	5.00	ND	91.1	70-130		
<i>Surrogate: 1,2-Dinitrobenzene</i>			<i>8.73</i>	<i>ug/L</i>	<i>10.0</i>		<i>87.3</i>	<i>70-130</i>		
<hr/>										
<b>Matrix Spike Dup (BDL0072-MSD1)</b>			<b>Source: MDK0709-10</b>		Prepared: 12/4/2023		Analyzed: 12/26/2023			
HMX	4.21		0.500	ug/L	5.00	ND	84.2	70-130	2.19	25
RDX	4.67		0.500	ug/L	5.00	ND	93.4	70-130	1.54	25
1,3,5-TNB	4.05		0.500	ug/L	5.00	ND	81.0	70-130	1.95	25
1,3-Dinitrobenzene	4.28		0.500	ug/L	5.00	ND	85.5	70-130	1.06	25
NB	4.33		0.500	ug/L	5.00	ND	86.5	70-130	1.83	25
2,4,6-Trinitrotoluene	4.20		0.500	ug/L	5.00	ND	84.1	70-130	1.63	25
Tetryl	4.20		0.500	ug/L	5.00	ND	84.1	70-130	0.140	25
2,6-DNT	4.50		0.500	ug/L	5.00	ND	90.0	70-130	1.36	25
2,4-Dinitrotoluene	4.17		0.500	ug/L	5.00	ND	83.5	70-130	1.50	25
2-Nitrotoluene	4.62		0.500	ug/L	5.00	ND	92.4	70-130	2.69	25
4-Nitrotoluene	4.56		0.500	ug/L	5.00	ND	91.1	70-130	1.15	25
4-Amino-2,6-dinitrotoluene	4.25		0.500	ug/L	5.00	ND	85.0	70-130	2.64	25
3-Nitrotoluene	4.59		0.500	ug/L	5.00	ND	91.7	70-130	1.77	25
2-Amino-4,6-dinitrotoluene	4.44		0.500	ug/L	5.00	ND	88.8	70-130	1.42	25
<i>Surrogate: 1,2-Dinitrobenzene</i>			<i>8.42</i>	<i>ug/L</i>	<i>10.0</i>		<i>84.2</i>	<i>70-130</i>		

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## Quality Control Data (Continued)

### Semivolatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0072 - Explosives (Continued)</b>										
<b>Matrix Spike Dup (BDL0072-MSD2)</b>			<b>Source: MDK0735-04</b>		Prepared: 12/4/2023 Analyzed: 12/27/2023					
HMX	4.53		0.500	ug/L	5.00	ND	90.5	70-130	1.95	25
RDX	4.90		0.500	ug/L	5.00	ND	98.0	70-130	0.477	25
1,3,5-TNB	4.40		0.500	ug/L	5.00	ND	88.0	70-130	1.45	25
1,3-Dinitrobenzene	4.56		0.500	ug/L	5.00	ND	91.2	70-130	2.84	25
NB	4.67		0.500	ug/L	5.00	ND	93.3	70-130	2.59	25
2,4,6-Trinitrotoluene	4.53		0.500	ug/L	5.00	ND	90.6	70-130	0.928	25
Tetryl	4.23		0.500	ug/L	5.00	ND	84.6	70-130	0.0423	25
2,6-DNT	4.18		0.500	ug/L	5.00	ND	83.6	70-130	5.57	25
2,4-Dinitrotoluene	4.44		0.500	ug/L	5.00	ND	88.8	70-130	1.85	25
2-Nitrotoluene	4.63		0.500	ug/L	5.00	ND	92.7	70-130	1.60	25
4-Nitrotoluene	4.38		0.500	ug/L	5.00	ND	87.5	70-130	3.55	25
4-Amino-2,6-dinitrotoluene	4.31		0.500	ug/L	5.00	ND	86.3	70-130	2.97	25
3-Nitrotoluene	4.16		0.500	ug/L	5.00	ND	83.1	70-130	5.37	25
2-Amino-4,6-dinitrotoluene	4.30		0.500	ug/L	5.00	ND	86.1	70-130	5.73	25
<i>Surrogate: 1,2-Dinitrobenzene</i>			<i>8.18</i>	<i>ug/L</i>	<i>10.0</i>		<i>81.8</i>	<i>70-130</i>		

## Quality Control Data (Continued)

### Volatiles

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0149 - VOC</b>										
<b>Blank (BDL0149-BLK1)</b>			Prepared & Analyzed: 12/5/2023							
Acrylonitrile	ND		0.500	ug/L						
Acetone	ND		2.50	ug/L						
p-Chlorotoluene	ND		0.500	ug/L						
Benzene	ND		0.500	ug/L						
o-Chlorotoluene	ND		0.500	ug/L						
Carbon disulfide	ND		0.500	ug/L						
2,2-Dichloropropane	ND		0.500	ug/L						
2-hexanone	ND		2.50	ug/L						
Bromobenzene	ND		0.500	ug/L						
Bromochloromethane	ND		0.500	ug/L						
Bromodichloromethane	ND		0.500	ug/L						
Bromomethane	ND		0.500	ug/L						
Carbon Tetrachloride	ND		0.500	ug/L						
Chlorobenzene (Monochlorobenzene)	ND		0.500	ug/L						
Chloroform	ND		0.500	ug/L						
Chloroethane	ND		0.500	ug/L						
1,4-Dichlorobenzene (para-Dichlorobenzene)	ND		0.500	ug/L						
Bromoform	ND		0.500	ug/L						
1,2,4-Trimethylbenzene	ND		0.500	ug/L						
Chloromethane	ND		0.500	ug/L						
1,1,1,2-Tetrachloroethane	ND		0.500	ug/L						
1,1,2,2-Tetrachloroethane	ND		0.500	ug/L						
1,1,2-Trichloroethane	ND		0.500	ug/L						
1,1-Dichloroethane	ND		0.500	ug/L						
1,1-Dichloroethylene	ND		0.500	ug/L						

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## Quality Control Data (Continued)

### Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0149 - VOC (Continued)</b>										
<b>Blank (BDL0149-BLK1)</b>										
Prepared & Analyzed: 12/5/2023										
1,1-Dichloropropene	ND		0.500	ug/L						
1,1,1-Trichloroethane	ND		0.500	ug/L						
1,2,3-Trichloropropane	ND		0.500	ug/L						
1,3-Dichloropropane	ND		0.500	ug/L						
DBCP (screening)	ND		0.500	ug/L						
EDB (screening)	ND		0.500	ug/L						
1,2-Dichlorobenzene (ortho-Dichlorobenzene)	ND		0.500	ug/L						
1,2-Dichloroethane	ND		0.500	ug/L						
1,2-Dichloropropane	ND		0.500	ug/L						
1,3,5-Trimethylbenzene	ND		0.500	ug/L						
m-Dichlorobenzene	ND		0.500	ug/L						
1,2,3-Trichlorobenzene	ND		0.500	ug/L						
Tetrachloroethylene	ND		0.500	ug/L						
1,2,4-Trichlorobenzene	ND		0.500	ug/L						
Vinyl Chloride	ND		0.500	ug/L						
Trichlorofluoromethane	ND		0.500	ug/L						
Trichloroethene	ND		0.500	ug/L						
trans-1,3-Dichloropropene	ND		0.500	ug/L						
trans-1,2 Dichloroethylene	ND		0.500	ug/L						
Toluene	ND		0.500	ug/L						
cis-1,2-Dichloroethylene	ND		0.500	ug/L						
tert-Butylbenzene	ND		0.500	ug/L						
Styrene	ND		0.500	ug/L						
sec-Butylbenzene	ND		0.500	ug/L						
p-isopropyltoluene	ND		0.500	ug/L						
o-Xylene (MCL for total)	ND		0.500	ug/L						
n-Propylbenzene	ND		0.500	ug/L						
Ethylbenzene	ND		0.500	ug/L						
n-Butylbenzene	ND		0.500	ug/L						
Dibromochloromethane	ND		0.500	ug/L						
Dichlorodifluoromethane	ND		0.500	ug/L						
cis-1,3-Dichloropropene	ND		0.500	ug/L						
Hexachlorobutadiene	ND		0.500	ug/L						
Isopropylbenzene	ND		0.500	ug/L						
m/p Xylenes (MCL for total)	ND		0.500	ug/L						
Methyl ethyl ketone (MEK)	ND		2.50	ug/L						
Methyl isobutyl ketone (MIBK)	ND		2.50	ug/L						
Methylene Chloride (Dichloromethane)	ND		2.50	ug/L						
methyl-t-butyl ether (MTBE)	ND		0.500	ug/L						
Naphthalene	ND		0.500	ug/L						
Dibromomethane	ND		0.500	ug/L						
<hr/>										
Surrogate: 4-Bromofluorobenzene			19.9	ug/L	20.0		99.5	70-130		
Surrogate: Toluene-d8			20.2	ug/L	20.0		101	70-130		
Surrogate: 1,2-Dichlorobenzene-d4			20.6	ug/L	20.0		103	70-130		

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## Quality Control Data (Continued)

### Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0149 - VOC (Continued)</b>										
<b>LCS (BDL0149-BS1)</b>					Prepared & Analyzed: 12/5/2023					
Methyl ethyl ketone (MEK)	8.67		2.50	ug/L	10.0		86.7	55-154		
Dibromomethane	8.99		0.500	ug/L	10.0		89.9	80-120		
m/p Xylenes (MCL for total)	18.2		0.500	ug/L	20.0		90.8	80-120		
Isopropylbenzene	9.15		0.500	ug/L	10.0		91.5	80-120		
Hexachlorobutadiene	9.12		0.500	ug/L	10.0		91.2	80-120		
Ethylbenzene	8.82		0.500	ug/L	10.0		88.2	80-120		
Dichlorodifluoromethane	8.31		0.500	ug/L	10.0		83.1	57-130		
Dibromochloromethane	8.53		0.500	ug/L	10.0		85.3	80-121		
cis-1,3-Dichloropropene	8.32		0.500	ug/L	10.0		83.2	79-123		
cis-1,2-Dichloroethylene	9.06		0.500	ug/L	10.0		90.6	80-120		
Chloroform	9.06		0.500	ug/L	10.0		90.6	80-120		
Chloroethane	8.64		0.500	ug/L	10.0		86.4	78-120		
Carbon Tetrachloride	9.49		0.500	ug/L	10.0		94.9	80-120		
Methyl isobutyl ketone (MIBK)	8.24		2.50	ug/L	10.0		82.4	70-136		
Chlorobenzene (Monochlorobenzene)	8.77		0.500	ug/L	10.0		87.7	80-120		
Tetrachloroethylene	8.62		0.500	ug/L	10.0		86.2	80-120		
Naphthalene	8.08		0.500	ug/L	10.0		80.8	66-133		
Vinyl Chloride	9.38		0.500	ug/L	10.0		93.8	75-120		
Carbon disulfide	9.16		0.500	ug/L	10.0		91.6	80-120		
Trichloroethene	9.06		0.500	ug/L	10.0		90.6	80-120		
trans-1,3-Dichloropropene	8.10		0.500	ug/L	10.0		81.0	69-130		
trans-1,2 Dichloroethylene	9.10		0.500	ug/L	10.0		91.0	80-120		
Trichlorofluoromethane	9.66		0.500	ug/L	10.0		96.6	61-140		
Toluene	9.10		0.500	ug/L	10.0		91.0	80-120		
methyl-t-butyl ether (MTBE)	8.67		0.500	ug/L	10.0		86.7	71-130		
tert-Butylbenzene	9.00		0.500	ug/L	10.0		90.0	80-120		
Styrene	8.44		0.500	ug/L	10.0		84.4	80-120		
sec-Butylbenzene	9.27		0.500	ug/L	10.0		92.7	80-120		
p-isopropyltoluene	9.16		0.500	ug/L	10.0		91.6	80-120		
o-Xylene (MCL for total)	8.92		0.500	ug/L	10.0		89.2	80-120		
n-Butylbenzene	9.04		0.500	ug/L	10.0		90.4	74-122		
1,1-Dichloropropene	9.33		0.500	ug/L	10.0		93.3	80-120		
1,2-Dichlorobenzene (ortho-Dichlorobenzene)	8.46		0.500	ug/L	10.0		84.6	80-120		
EDB (screening)	8.65		0.500	ug/L	10.0		86.5	70-130		
1,1,1-Trichloroethane	9.20		0.500	ug/L	10.0		92.0	80-120		
1,2,4-Trimethylbenzene	9.29		0.500	ug/L	10.0		92.9	80-120		
Bromoform	8.04		0.500	ug/L	10.0		80.4	68-133		
1,2,3-Trichlorobenzene	8.26		0.500	ug/L	10.0		82.6	78-120		
DBCP (screening)	8.10		0.500	ug/L	10.0		81.0	71-128		
1,1-Dichloroethylene	9.30		0.500	ug/L	10.0		93.0	70-129		
1,1-Dichloroethane	9.13		0.500	ug/L	10.0		91.3	80-120		
1,1,2-Trichloroethane	8.66		0.500	ug/L	10.0		86.6	80-120		
1,1,2,2-Tetrachloroethane	8.65		0.500	ug/L	10.0		86.5	77-123		
1,1,1,2-Tetrachloroethane	8.61		0.500	ug/L	10.0		86.1	80-120		
n-Propylbenzene	9.10		0.500	ug/L	10.0		91.0	80-120		
1,2,3-Trichloropropane	8.69		0.500	ug/L	10.0		86.9	80-120		
Benzene	9.08		0.500	ug/L	10.0		90.8	80-120		
Bromodichloromethane	9.00		0.500	ug/L	10.0		90.0	80-120		
Bromochloromethane	9.21		0.500	ug/L	10.0		92.1	80-120		
1,2,4-Trichlorobenzene	8.24		0.500	ug/L	10.0		82.4	80-120		

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## Quality Control Data (Continued)

### Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0149 - VOC (Continued)</b>										
<b>LCS (BDL0149-BS1)</b>					Prepared & Analyzed: 12/5/2023					
Bromobenzene	8.63		0.500	ug/L	10.0		86.3	80-120		
1,2-Dichloroethane	9.12		0.500	ug/L	10.0		91.2	80-120		
Acrylonitrile	8.38		0.500	ug/L	10.0		83.8	73-131		
p-Chlorotoluene	9.02		0.500	ug/L	10.0		90.2	80-124		
2-hexanone	8.30		2.50	ug/L	10.0		83.0	65-140		
2,2-Dichloropropane	9.02		0.500	ug/L	10.0		90.2	80-120		
1,4-Dichlorobenzene (para-Dichlorobenzene)	8.66		0.500	ug/L	10.0		86.6	80-120		
1,3-Dichloropropane	8.62		0.500	ug/L	10.0		86.2	80-120		
m-Dichlorobenzene	8.75		0.500	ug/L	10.0		87.5	80-120		
1,3,5-Trimethylbenzene	9.20		0.500	ug/L	10.0		92.0	80-121		
1,2-Dichloropropane	8.95		0.500	ug/L	10.0		89.5	80-120		
o-Chlorotoluene	9.01		0.500	ug/L	10.0		90.1	80-120		
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Surrogate: Toluene-d8			20.6	ug/L	20.0		103	70-130		
Surrogate: 4-Bromofluorobenzene			20.4	ug/L	20.0		102	70-130		
Surrogate: 1,2-Dichlorobenzene-d4			19.7	ug/L	20.0		98.3	70-130		

### Matrix Spike (BDL0149-MS1)

Source: MDL0022-01

Prepared & Analyzed: 12/5/2023

cis-1,3-Dichloropropene	9.78		0.500	ug/L	10.0	ND	97.8	74-124		
Methyl ethyl ketone (MEK)	10.6		2.50	ug/L	10.0	ND	106	47-165		
Carbon Tetrachloride	11.5		0.500	ug/L	10.0	ND	115	70-130		
m/p Xylenes (MCL for total)	20.6		0.500	ug/L	20.0	ND	103	57-130		
Isopropylbenzene	10.2		0.500	ug/L	10.0	ND	102	70-130		
Hexachlorobutadiene	9.87		0.500	ug/L	10.0	ND	98.7	70-130		
Ethylbenzene	10.0		0.500	ug/L	10.0	ND	100	70-130		
Dichlorodifluoromethane	9.78		0.500	ug/L	10.0	ND	97.8	57-136		
Chloroethane	11.5		0.500	ug/L	10.0	ND	115	68-138		
Dibromochloromethane	9.53		0.500	ug/L	10.0	ND	95.3	70-130		
cis-1,2-Dichloroethylene	10.6		0.500	ug/L	10.0	ND	106	70-130		
Chloroform	10.7		0.500	ug/L	10.0	ND	107	70-130		
Chlorobenzene (Monochlorobenzene)	9.87		0.500	ug/L	10.0	ND	98.7	70-130		
Dibromomethane	10.8		0.500	ug/L	10.0	ND	108	70-130		
Styrene	9.34		0.500	ug/L	10.0	ND	93.4	30-130		
Trichlorofluoromethane	11.6		0.500	ug/L	10.0	ND	116	50-154		
Trichloroethene	10.9		0.500	ug/L	10.0	ND	109	70-130		
1,2-Dichloropropane	10.4		0.500	ug/L	10.0	ND	104	70-130		
trans-1,3-Dichloropropene	9.19		0.500	ug/L	10.0	ND	91.9	61-131		
Carbon disulfide	11.3		0.500	ug/L	10.0	ND	113	70-130		
Toluene	10.8		0.500	ug/L	10.0	ND	108	70-130		
trans-1,2 Dichloroethylene	10.7		0.500	ug/L	10.0	ND	107	70-130		
tert-Butylbenzene	10.2		0.500	ug/L	10.0	ND	102	70-130		
Methyl isobutyl ketone (MIBK)	9.77		2.50	ug/L	10.0	ND	97.7	53-167		
sec-Butylbenzene	10.5		0.500	ug/L	10.0	ND	105	70-130		
p-isopropyltoluene	10.3		0.500	ug/L	10.0	ND	103	70-130		
o-Xylene (MCL for total)	10.0		0.500	ug/L	10.0	ND	100	62-127		
n-Propylbenzene	10.4		0.500	ug/L	10.0	ND	104	70-130		
n-Butylbenzene	10.2		0.500	ug/L	10.0	ND	102	67-130		
Naphthalene	9.03		0.500	ug/L	10.0	ND	90.3	56-147		
methyl-t-butyl ether (MTBE)	9.99		0.500	ug/L	10.0	ND	99.9	57-138		
Tetrachloroethylene	9.85		0.500	ug/L	10.0	ND	98.5	70-130		
1,1-Dichloropropene	11.0		0.500	ug/L	10.0	ND	110	70-130		

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## Quality Control Data (Continued)

### Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0149 - VOC (Continued)</b>										
<b>Matrix Spike (BDL0149-MS1)</b>			<b>Source: MDL0022-01</b>			<b>Prepared &amp; Analyzed: 12/5/2023</b>				
1,3,5-Trimethylbenzene	10.4		0.500	ug/L	10.0	ND	104	40-140		
EDB (screening)	9.88		0.500	ug/L	10.0	ND	98.8	70-130		
DBCP (screening)	9.26		0.500	ug/L	10.0	ND	92.6	55-146		
1,2,4-Trimethylbenzene	10.4		0.500	ug/L	10.0	ND	104	40-140		
1,2,4-Trichlorobenzene	8.75		0.500	ug/L	10.0	ND	87.5	70-130		
1,2,3-Trichlorobenzene	9.24		0.500	ug/L	10.0	ND	92.4	67-134		
1,2-Dichloroethane	10.6		0.500	ug/L	10.0	ND	106	70-130		
1,1-Dichloroethylene	10.8		0.500	ug/L	10.0	ND	108	70-130		
1,1-Dichloroethane	10.6		0.500	ug/L	10.0	ND	106	70-130		
1,1,2-Trichloroethane	9.90		0.500	ug/L	10.0	ND	99.0	70-130		
1,1,2,2-Tetrachloroethane	10.1		0.500	ug/L	10.0	ND	101	67-136		
1,1,1-Trichloroethane	10.9		0.500	ug/L	10.0	ND	109	70-130		
Vinyl Chloride	11.2		0.500	ug/L	10.0	ND	112	70-130		
1,2,3-Trichloropropane	10.1		0.500	ug/L	10.0	ND	101	69-137		
2-hexanone	9.77		2.50	ug/L	10.0	ND	97.7	43-175		
Bromodichloromethane	10.6		0.500	ug/L	10.0	ND	106	70-130		
Bromochloromethane	11.0		0.500	ug/L	10.0	ND	110	70-130		
Bromobenzene	9.75		0.500	ug/L	10.0	ND	97.5	70-130		
Benzene	10.7		0.500	ug/L	10.0	ND	107	70-130		
Acrylonitrile	11.1		0.500	ug/L	10.0	ND	111	65-137		
1,2-Dichlorobenzene (ortho-Dichlorobenzene)	9.62		0.500	ug/L	10.0	ND	96.2	70-130		
Bromoform	8.70		0.500	ug/L	10.0	ND	87.0	59-140		
o-Chlorotoluene	10.2		0.500	ug/L	10.0	ND	102	70-130		
2,2-Dichloropropane	10.5		0.500	ug/L	10.0	ND	105	70-130		
1,4-Dichlorobenzene (para-Dichlorobenzene)	9.59		0.500	ug/L	10.0	ND	95.9	70-130		
1,3-Dichloropropane	9.76		0.500	ug/L	10.0	ND	97.6	70-130		
m-Dichlorobenzene	9.61		0.500	ug/L	10.0	ND	96.1	70-130		
1,1,1,2-Tetrachloroethane	9.88		0.500	ug/L	10.0	ND	98.8	70-130		
p-Chlorotoluene	10.4		0.500	ug/L	10.0	ND	104	70-130		
<hr/>										
Surrogate: Toluene-d8			21.0	ug/L	20.0		105	70-130		
Surrogate: 4-Bromofluorobenzene			20.5	ug/L	20.0		102	70-130		
Surrogate: 1,2-Dichlorobenzene-d4			19.7	ug/L	20.0		98.3	70-130		

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## Quality Control Data (Continued)

### Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0149 - VOC (Continued)</b>										
<b>Matrix Spike Dup (BDL0149-MSD1)</b>			<b>Source: MDL0022-01</b>			<b>Prepared &amp; Analyzed: 12/5/2023</b>				
1,2-Dichloropropane	10.4		0.500	ug/L	10.0	ND	104	70-130	0.384	20
p-Chlorotoluene	9.99		0.500	ug/L	10.0	ND	99.9	70-130	4.21	20
Carbon disulfide	11.2		0.500	ug/L	10.0	ND	112	70-130	1.51	20
1,3-Dichloropropane	9.82		0.500	ug/L	10.0	ND	98.2	70-130	0.613	20
1,4-Dichlorobenzene (para-Dichlorobenzene)	9.48		0.500	ug/L	10.0	ND	94.8	70-130	1.15	20
2,2-Dichloropropane	10.6		0.500	ug/L	10.0	ND	106	70-130	0.285	20
o-Chlorotoluene	9.99		0.500	ug/L	10.0	ND	99.9	70-130	1.88	20
1,2-Dichloroethane	10.6		0.500	ug/L	10.0	ND	106	70-130	0.283	20
Acrylonitrile	11.0		0.500	ug/L	10.0	ND	110	65-137	0.363	20
Benzene	10.6		0.500	ug/L	10.0	ND	106	70-130	1.13	20
Bromobenzene	9.66		0.500	ug/L	10.0	ND	96.6	70-130	0.927	20
Bromochloromethane	11.0		0.500	ug/L	10.0	ND	110	70-130	0.455	20
Bromodichloromethane	10.7		0.500	ug/L	10.0	ND	107	70-130	0.375	20
m-Dichlorobenzene	9.75		0.500	ug/L	10.0	ND	97.5	70-130	1.45	20
2-hexanone	9.80		2.50	ug/L	10.0	ND	98.0	43-175	0.307	20
1,2,3-Trichlorobenzene	9.18		0.500	ug/L	10.0	ND	91.8	67-134	0.651	20
1,1,1,2-Tetrachloroethane	9.90		0.500	ug/L	10.0	ND	99.0	70-130	0.202	20
1,1,1-Trichloroethane	10.7		0.500	ug/L	10.0	ND	107	70-130	1.76	20
1,1,2,2-Tetrachloroethane	9.96		0.500	ug/L	10.0	ND	99.6	67-136	0.900	20
1,1,2-Trichloroethane	9.87		0.500	ug/L	10.0	ND	98.7	70-130	0.303	20
1,1-Dichloroethane	10.6		0.500	ug/L	10.0	ND	106	70-130	0.378	20
1,3,5-Trimethylbenzene	10.1		0.500	ug/L	10.0	ND	101	40-140	2.63	20
1,1-Dichloropropene	10.9		0.500	ug/L	10.0	ND	109	70-130	0.914	20
Carbon Tetrachloride	11.2		0.500	ug/L	10.0	ND	112	70-130	2.38	20
1,2,3-Trichloropropane	9.86		0.500	ug/L	10.0	ND	98.6	69-137	2.50	20
1,2,4-Trichlorobenzene	8.87		0.500	ug/L	10.0	ND	88.7	70-130	1.36	20
1,2,4-Trimethylbenzene	10.1		0.500	ug/L	10.0	ND	101	40-140	2.73	20
DBCP (screening)	9.50		0.500	ug/L	10.0	ND	95.0	55-146	2.56	20
EDB (screening)	9.96		0.500	ug/L	10.0	ND	99.6	70-130	0.806	20
1,2-Dichlorobenzene (ortho-Dichlorobenzene)	9.37		0.500	ug/L	10.0	ND	93.7	70-130	2.63	20
1,1-Dichloroethylene	10.7		0.500	ug/L	10.0	ND	107	70-130	0.935	20
Tetrachloroethylene	9.66		0.500	ug/L	10.0	ND	96.6	70-130	1.95	20
Bromoform	8.92		0.500	ug/L	10.0	ND	89.2	59-140	2.50	20
n-Propylbenzene	10.1		0.500	ug/L	10.0	ND	101	70-130	2.83	20
o-Xylene (MCL for total)	9.87		0.500	ug/L	10.0	ND	98.7	62-127	1.41	20
p-isopropyltoluene	10.1		0.500	ug/L	10.0	ND	101	70-130	2.25	20
sec-Butylbenzene	10.1		0.500	ug/L	10.0	ND	101	70-130	3.40	20
Naphthalene	9.15		0.500	ug/L	10.0	ND	91.5	56-147	1.32	20
tert-Butylbenzene	9.89		0.500	ug/L	10.0	ND	98.9	70-130	3.38	20
methyl-t-butyl ether (MTBE)	10.2		0.500	ug/L	10.0	ND	102	57-138	2.28	20
Toluene	10.6		0.500	ug/L	10.0	ND	106	70-130	1.97	20
trans-1,2 Dichloroethylene	10.5		0.500	ug/L	10.0	ND	105	70-130	1.32	20
trans-1,3-Dichloropropene	9.32		0.500	ug/L	10.0	ND	93.2	61-131	1.40	20
Trichloroethene	10.7		0.500	ug/L	10.0	ND	107	70-130	1.49	20
Trichlorofluoromethane	11.3		0.500	ug/L	10.0	ND	113	50-154	2.44	20
Styrene	9.37		0.500	ug/L	10.0	ND	93.7	30-130	0.321	20
Dichlorodifluoromethane	9.54		0.500	ug/L	10.0	ND	95.4	57-136	2.48	20
Chlorobenzene (Monochlorobenzene)	9.76		0.500	ug/L	10.0	ND	97.6	70-130	1.12	20
Chloroethane	11.3		0.500	ug/L	10.0	ND	113	68-138	2.19	20
Chloroform	10.6		0.500	ug/L	10.0	ND	106	70-130	0.282	20

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## Quality Control Data (Continued)

### Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0149 - VOC (Continued)</b>										
<b>Matrix Spike Dup (BDL0149-MSD1)</b>			<b>Source: MDL0022-01</b>			Prepared & Analyzed: 12/5/2023				
cis-1,2-Dichloroethylene	10.4		0.500	ug/L	10.0	ND	104	70-130	1.90	20
cis-1,3-Dichloropropene	9.88		0.500	ug/L	10.0	ND	98.8	74-124	1.02	20
n-Butylbenzene	10.0		0.500	ug/L	10.0	ND	100	67-130	1.69	20
Dibromomethane	10.7		0.500	ug/L	10.0	ND	107	70-130	0.928	20
Vinyl Chloride	11.2		0.500	ug/L	10.0	ND	112	70-130	0.537	20
Ethylbenzene	9.88		0.500	ug/L	10.0	ND	98.8	70-130	1.21	20
Hexachlorobutadiene	9.53		0.500	ug/L	10.0	ND	95.3	70-130	3.51	20
Isopropylbenzene	10.0		0.500	ug/L	10.0	ND	100	70-130	1.68	20
m/p Xylenes (MCL for total)	20.2		0.500	ug/L	20.0	ND	101	57-130	1.77	20
Methyl ethyl ketone (MEK)	10.6		2.50	ug/L	10.0	ND	106	47-165	0.284	20
Methyl isobutyl ketone (MIBK)	10.3		2.50	ug/L	10.0	ND	103	53-167	5.48	20
Dibromochloromethane	9.67		0.500	ug/L	10.0	ND	96.7	70-130	1.46	20
-----										
Surrogate: 4-Bromofluorobenzene			20.3	ug/L	20.0		101	70-130		
Surrogate: Toluene-d8			21.0	ug/L	20.0		105	70-130		
Surrogate: 1,2-Dichlorobenzene-d4			19.9	ug/L	20.0		99.5	70-130		



### Chain of Custody Record

1282 Alturas  
504 E Sprague



MDL0022

Due: 12/15/23

99

Company Name: PBS Engineering and Environmental	Project Manager: Scott Braunsten
Address: 4412 S Corbett Ave	Project Name & #: Camp Bonneville, 76151.012
City: Portland State: OR Zip: 97239	Purchase Order #:
Phone: 503-248-1939	Sampler Name & Phone: D. Rakki + R. Martin 546-734-9677
Email Address(es): scott.braunsten@pbsusa.com, samantha.ekes@pbsusa.com	

Normal  
 Next Day\*  
 2nd Day\*  
 Other\*

\*All rush order requests must have prior approval

Phone \_\_\_\_\_  
 Email \_\_\_\_\_

Lab ID	Sample Identification	Sampling Date/Time	Matrix	# of Containers	Sample Volume	List Analyses Requested		
						Preservative:	VOCs by 8260B	Explosives by 8330
	04Q03L4M03BW	11-30-23 / 9:15	H2O	6		X	X	X
	04Q03L4M03BW			6		X	X	X
	04Q03L4M03BW			6		X	X	X
	04Q03L4M03BW			6		X	X	X
	04Q03L4M03BW			6		X	X	X
	04Q03L4M03BW			6		X	X	X
	04Q03L4M03BW			6		X	X	X
	04Q03L4M03BW			6		X	X	X
	1130Q3TB			1		X		

**Note Special Instructions/Comments**

Please send login confirmation

Please provide EQUIS EDD + WA EIM

---

**Inspection Checklist**

Received Intact? Y N

Labels & Chains Agree? Y N

Containers Sealed? Y N

No VOC Head Space? Y N

Cooler? Y N

Ice/Ice Packs Present? Y N

Temperature (°C): \_\_\_\_\_

Number of Containers: \_\_\_\_\_

Shipped Via: \_\_\_\_\_

Preservative: \_\_\_\_\_

Date & Time: \_\_\_\_\_

Inspected By: \_\_\_\_\_

Samples submitted to Anatek Labs may be subcontracted to other accredited labs if necessary. This message serves as notice of this possibility. Subcontracted analyses will be clearly noted on the analytical report.

Form COC01.02 - Eff 1 Mar 2021

Page 1 of 1

**ANATEK LABS**

*Chain of Custody Record*

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**Turn Around Time & Reporting**

Please refer to our normal turn around times at  
[www.anateklabs.com/pricing-lists](http://www.anateklabs.com/pricing-lists)

Normal Next Day\* Phone  
 2nd Day\* Email  
 Other\* have prior approval

Company Name: PBS Engineering and Environmental		Project Manager: Scott Braunsten	
Address: 4412 S Corbett Ave		Project Name & #: Camp Bonneville, 76151.012	
City: Portland	State: OR	Zip: 97239	Purchase Order #:
Phone: 503-248-1939	Sampler Name & Phone: D. Rucki + R. Martin 646-734-9677		
Email Address(es): scott.braunsten@pbsusa.com, samantha.eckes@pbsusa.com			

**List Analyses Requested**

Lab ID	Sample Identification	Sampling Date/Time	H2O	Matrix	# of Containers	Sample Volume	VOCs by 8260B	Explosives by 8330	Perchlorate by 6850
	04023LHM108W	11-30-23 / 1445			6		X	X	X
	04023LHM108V	↓			6		X	X	X

**Note Special Instructions/Comments**

Please send login confirmation

Please provide EQUIS EDD + WA EIM

*Run Data Package III*

**Inspection Checklist**

Received Intact? Y N

Labels & Chains Agree? Y N

Containers Sealed? Y N

No VOC Head Space? Y N

Cooler? Y N

Ice/Ice Packs Present? Y N

Relinquished by	Printed Name	Signature	Company	Date	Time
Received by	David Rucki	<i>David Rucki</i>	PBS	11-30-23	1555
Relinquished by					
Received by					
Relinquished by					
Received by					

Samples submitted to Anatek Labs may be subcontracted to other accredited labs if necessary. This message serves as notice of this possibility. Subcontracted analyses will be clearly noted on the analytical report.



Sample Receipt and Preservation Form

Client Name: PBS

TAT: Normal RUSH: \_\_\_\_\_ days

Samples Received From: FedEx UPS USPS Client Courier Other: \_\_\_\_\_

Custody Seal on Cooler/Box: Yes No Custody Seals Intact: Yes No N/A

Number of Coolers/Boxes: 3 Type of Ice: Wet Ice Ice Packs Dry Ice None

Packing Material: Bubble Wrap Bags Foam/Peanuts Paper None Other: \_\_\_\_\_

Cooler Temp As Read (°C): 3.4 Cooler Temp Corrected (°C): - Thermometer Used: 125

Comments:

Samples Received Intact? Yes No N/A  
 Chain of Custody Present/Complete? Yes No N/A  
 Labels and Chains Agree? Yes No N/A  
 Samples Received Within Hold Time? Yes No N/A  
 Correct Containers Received? Yes No N/A  
 Anatek Bottles Used? Yes No Unknown  
 Total Number of Sample Bottles Received: 55


Initial pH: pH Paper ID:

Samples Properly Preserved? Yes No N/A  
*If No, record preservation and pH-after details*  
 VOC Vials Free of Headspace (<6mm)? Yes No N/A  
 VOC Trip Blanks Present? Yes No N/A

<2	or	

Record preservatives (and lot numbers, if known) for containers below:

GIL - Explosives x 18  
PI25 - perchlorate x 9  
GH4 - HCl (2309) VOC 8260 x 27 + 1 Blank

Notes, comments, etc. (also use this space if contacting the client - record names and date/time)

Received/Inspected By: SPM Date/Time: 12/1/23 13:38

Form F19.01 - Eff 1 Dec 2022

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**Client:** PBS Engineering - Portland  
**Address:** 4412 SW Corbett Ave  
Portland, OR 97239  
**Attn:** Scott Braunsten

**Work Order:** MDL0102  
**Project:** Camp Bonneville, 76151.012  
**Reported:** 1/24/2024 12:02

## Analytical Results Report

**Sample Location:** 04Q23L4MW09AW  
**Lab/Sample Number:** MDL0102-01      **Collect Date:** 12/01/23 09:45  
**Date Received:** 12/05/23 11:56      **Collected By:** D.Rukki, R.Martin  
**Matrix:** Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Inorganics</b>							
Perchlorate	208	ug/L	25.0	12/12/23 11:29	GPB	EPA 6850	
<b>Semivolatiles</b>							
1,3,5-TNB	ND	ug/L	0.500	12/27/23 18:51	MER	EPA 8330B	
1,3-Dinitrobenzene	ND	ug/L	0.500	12/27/23 18:51	MER	EPA 8330B	
2,4,6-Trinitrotoluene	ND	ug/L	0.100	12/27/23 18:51	MER	EPA 8330B	
2,4-Dinitrotoluene	ND	ug/L	0.100	12/27/23 18:51	MER	EPA 8330B	
2,6-DNT	ND	ug/L	0.500	12/27/23 18:51	MER	EPA 8330B	
2-Amino-4,6-dinitrotoluene	ND	ug/L	0.500	12/27/23 18:51	MER	EPA 8330B	
2-Nitrotoluene	ND	ug/L	0.500	12/27/23 18:51	MER	EPA 8330B	
3-Nitrotoluene	ND	ug/L	0.500	12/27/23 18:51	MER	EPA 8330B	
4-Amino-2,6-dinitrotoluene	ND	ug/L	0.500	12/27/23 18:51	MER	EPA 8330B	
4-Nitrotoluene	ND	ug/L	0.500	12/27/23 18:51	MER	EPA 8330B	
HMX	1.05	ug/L	0.100	12/27/23 18:51	MER	EPA 8330B	
NB	ND	ug/L	0.500	12/27/23 18:51	MER	EPA 8330B	
RDX	4.84	ug/L	0.100	12/27/23 18:51	MER	EPA 8330B	
Tetryl	ND	ug/L	0.500	12/27/23 18:51	MER	EPA 8330B	
<hr/>							
<i>Surrogate: 1,2-Dinitrobenzene</i>	<i>84.0%</i>		<i>70-130</i>	<i>12/27/23 18:51</i>	<i>MER</i>	<i>EPA 8330B</i>	
<b>Volatiles</b>							
1,1,1,2-Tetrachloroethane	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
1,1,1-Trichloroethane	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
1,1,2-Trichloroethane	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
1,1-Dichloroethane	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
1,1-Dichloroethene	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
1,1-dichloropropene	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
1,2,3-Trichlorobenzene	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
1,2,3-Trichloropropane	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
1,2,4-Trichlorobenzene	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
1,2,4-Trimethylbenzene	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
1,2-Dibromo-3-chloropropane (DBCP)	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
1,2-Dichlorobenzene	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
1,2-Dichloroethane	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
1,2-Dichloropropane	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
1,3,5-Trimethylbenzene	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
1,3-Dichlorobenzene	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	

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Sample Location: 04Q23L4MW09AW  
Lab/Sample Number: MDL0102-01 Collect Date: 12/01/23 09:45  
Date Received: 12/05/23 11:56 Collected By: D.Rukki, R.Martin  
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Volatiles (Continued)</b>							
1,3-Dichloropropane	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
1,4-Dichlorobenzene	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
2,2-Dichloropropane	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
2-Chlorotoluene	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
2-hexanone	ND	ug/L	2.50	12/6/23 10:32	BKP	EPA 8260D	
4-Chlorotoluene	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
Acetone	ND	ug/L	2.50	12/6/23 10:32	BKP	EPA 8260D	
Acrylonitrile	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
Benzene	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
Bromobenzene	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
Bromochloromethane	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
Bromodichloromethane	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
Bromoform	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
Bromomethane	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
Carbon disulfide	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
Carbon Tetrachloride	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
Chlorobenzene	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
Chloroethane	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
Chloroform	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
Chloromethane	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
cis-1,2-dichloroethene	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
cis-1,3-Dichloropropene	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
Dibromochloromethane	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
Dibromomethane	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
Dichlorodifluoromethane	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
Ethylbenzene	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
Hexachlorobutadiene	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
Isopropylbenzene	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
m+p-Xylene	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
Methyl ethyl ketone (MEK)	ND	ug/L	2.50	12/6/23 10:32	BKP	EPA 8260D	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.50	12/6/23 10:32	BKP	EPA 8260D	
Methylene chloride	ND	ug/L	2.50	12/6/23 10:32	BKP	EPA 8260D	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
Naphthalene	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
n-Butylbenzene	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
n-Propylbenzene	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
o-Xylene	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
p-isopropyltoluene	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
sec-Butylbenzene	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
Styrene	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
tert-Butylbenzene	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
Tetrachloroethene	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
Toluene	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
trans-1,2-Dichloroethene	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
trans-1,3-Dichloropropene	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
Trichloroethene	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
Trichlorofluoromethane	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	
Vinyl Chloride	ND	ug/L	0.500	12/6/23 10:32	BKP	EPA 8260D	

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Sample Location: 04Q23L4MW09AW  
Lab/Sample Number: MDL0102-01 Collect Date: 12/01/23 09:45  
Date Received: 12/05/23 11:56 Collected By: D.Rukki, R.Martin  
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Volatiles (Continued)</b>							
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	102%		70-130	12/6/23 10:32	BKP	EPA 8260D	
<i>Surrogate: 4-Bromofluorobenzene</i>	98.7%		70-130	12/6/23 10:32	BKP	EPA 8260D	
<i>Surrogate: Toluene-d8</i>	104%		70-130	12/6/23 10:32	BKP	EPA 8260D	

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Sample Location: 04Q23L4MW09BW  
 Lab/Sample Number: MDL0102-02 Collect Date: 12/01/23 10:45  
 Date Received: 12/05/23 11:56 Collected By: D.Rukki, R.Martin  
 Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Inorganics</b>							
Perchlorate	180	ug/L	25.0	12/12/23 11:37	GPB	EPA 6850	
<b>Semivolatiles</b>							
1,3,5-TNB	ND	ug/L	0.500	12/27/23 19:28	MER	EPA 8330B	
1,3-Dinitrobenzene	ND	ug/L	0.500	12/27/23 19:28	MER	EPA 8330B	
2,4,6-Trinitrotoluene	ND	ug/L	0.100	12/27/23 19:28	MER	EPA 8330B	
2,4-Dinitrotoluene	ND	ug/L	0.100	12/27/23 19:28	MER	EPA 8330B	
2,6-DNT	ND	ug/L	0.500	12/27/23 19:28	MER	EPA 8330B	
2-Amino-4,6-dinitrotoluene	ND	ug/L	0.500	12/27/23 19:28	MER	EPA 8330B	
2-Nitrotoluene	ND	ug/L	0.500	12/27/23 19:28	MER	EPA 8330B	
3-Nitrotoluene	ND	ug/L	0.500	12/27/23 19:28	MER	EPA 8330B	
4-Amino-2,6-dinitrotoluene	ND	ug/L	0.500	12/27/23 19:28	MER	EPA 8330B	
4-Nitrotoluene	ND	ug/L	0.500	12/27/23 19:28	MER	EPA 8330B	
HMX	1.68	ug/L	0.100	12/27/23 19:28	MER	EPA 8330B	
NB	ND	ug/L	0.500	12/27/23 19:28	MER	EPA 8330B	
RDX	25.0	ug/L	0.100	12/27/23 19:28	MER	EPA 8330B	
Tetryl	ND	ug/L	0.500	12/27/23 19:28	MER	EPA 8330B	
<hr/>							
<i>Surrogate: 1,2-Dinitrobenzene</i>	<i>77.8%</i>		<i>70-130</i>	<i>12/27/23 19:28</i>	<i>MER</i>	<i>EPA 8330B</i>	
<b>Volatiles</b>							
1,1,1,2-Tetrachloroethane	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
1,1,1-Trichloroethane	1.54	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
1,1,2,2-Tetrachloroethane	0.600	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
1,1,2-Trichloroethane	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
1,1-Dichloroethane	3.77	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
1,1-Dichloroethene	2.16	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
1,1-dichloropropene	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
1,2,3-Trichlorobenzene	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
1,2,3-Trichloropropane	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
1,2,4-Trichlorobenzene	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
1,2,4-Trimethylbenzene	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
1,2-Dibromo-3-chloropropane (DBCP)	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
1,2-Dichlorobenzene	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
1,2-Dichloroethane	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
1,2-Dichloropropane	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
1,3,5-Trimethylbenzene	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
1,3-Dichlorobenzene	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
1,3-Dichloropropane	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
1,4-Dichlorobenzene	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
2,2-Dichloropropane	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
2-Chlorotoluene	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
2-hexanone	ND	ug/L	2.50	12/6/23 11:01	BKP	EPA 8260D	
4-Chlorotoluene	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
Acetone	ND	ug/L	2.50	12/6/23 11:01	BKP	EPA 8260D	
Acrylonitrile	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
Benzene	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
Bromobenzene	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	

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Sample Location: 04Q23L4MW09BW  
 Lab/Sample Number: MDL0102-02 Collect Date: 12/01/23 10:45  
 Date Received: 12/05/23 11:56 Collected By: D.Rukki, R.Martin  
 Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Volatiles (Continued)</b>							
Bromochloromethane	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
Bromodichloromethane	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
Bromoform	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
Bromomethane	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
Carbon disulfide	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
Carbon Tetrachloride	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
Chlorobenzene	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
Chloroethane	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
Chloroform	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
Chloromethane	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
cis-1,2-dichloroethene	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
cis-1,3-Dichloropropene	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
Dibromochloromethane	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
Dibromomethane	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
Dichlorodifluoromethane	10.7	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
Ethylbenzene	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
Hexachlorobutadiene	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
Isopropylbenzene	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
m+p-Xylene	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
Methyl ethyl ketone (MEK)	ND	ug/L	2.50	12/6/23 11:01	BKP	EPA 8260D	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.50	12/6/23 11:01	BKP	EPA 8260D	
Methylene chloride	ND	ug/L	2.50	12/6/23 11:01	BKP	EPA 8260D	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
Naphthalene	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
n-Butylbenzene	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
n-Propylbenzene	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
o-Xylene	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
p-isopropyltoluene	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
sec-Butylbenzene	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
Styrene	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
tert-Butylbenzene	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
Tetrachloroethene	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
Toluene	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
trans-1,2-Dichloroethene	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
trans-1,3-Dichloropropene	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
Trichloroethene	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
Trichlorofluoromethane	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
Vinyl Chloride	ND	ug/L	0.500	12/6/23 11:01	BKP	EPA 8260D	
<hr/>							
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>103%</i>		<i>70-130</i>	<i>12/6/23 11:01</i>	<i>BKP</i>	<i>EPA 8260D</i>	
<hr/>							
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>99.3%</i>		<i>70-130</i>	<i>12/6/23 11:01</i>	<i>BKP</i>	<i>EPA 8260D</i>	
<hr/>							
<i>Surrogate: Toluene-d8</i>	<i>105%</i>		<i>70-130</i>	<i>12/6/23 11:01</i>	<i>BKP</i>	<i>EPA 8260D</i>	

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Authorized Signature,



Justin Doty For Todd Taruscio, Laboratory Manager

L5	The associated blank spike recovery was above laboratory/method acceptance limits. This analyte was not detected in the sample
PQL	Practical Quantitation Limit
ND	Not Detected
MCL	EPA's Maximum Contaminant Level
Dry	Sample results reported on a dry weight basis
*	Not a state-certified analyte
RPD	Relative Percent Difference
%REC	Percent Recovery
Source	Sample that was spiked or duplicated.

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The results reported related only to the samples indicated.

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## **Certifications**

<b>Code</b>	<b>Description</b>	<b>Facility</b>	<b>Number</b>
DOE WA	Washington Department of Ecology	Anatek-Moscow, ID	C595

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## Quality Control Data

### Inorganics

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0321 - Perchlorate</b>										
<b>Blank (BDL0321-BLK1)</b>										
Perchlorate	ND		0.500	ug/L						
					Prepared: 12/8/2023 Analyzed: 12/11/2023					
<b>Blank (BDL0321-BLK2)</b>										
Perchlorate	ND		0.500	ug/L						
					Prepared: 12/8/2023 Analyzed: 12/12/2023					
<b>LCS (BDL0321-BS1)</b>										
Perchlorate	5.23		0.500	ug/L	5.00		105	80-120		
					Prepared: 12/8/2023 Analyzed: 12/11/2023					
<b>LCS (BDL0321-BS2)</b>										
Perchlorate	4.69		0.500	ug/L	5.00		93.8	80-120		
					Prepared: 12/8/2023 Analyzed: 12/12/2023					
<b>Matrix Spike (BDL0321-MS1)</b>										
Perchlorate	5.20		0.500	ug/L	5.00	ND	104	80-120		
					Source: MDK0709-01 Prepared: 12/8/2023 Analyzed: 12/11/2023					
<b>Matrix Spike (BDL0321-MS2)</b>										
Perchlorate	324		25.0	ug/L	250	68.0	102	80-120		
					Source: MDK0735-08 Prepared: 12/8/2023 Analyzed: 12/12/2023					
<b>Matrix Spike Dup (BDL0321-MSD1)</b>										
Perchlorate	5.35		0.500	ug/L	5.00	ND	107	80-120	2.84	20
					Source: MDK0709-01 Prepared: 12/8/2023 Analyzed: 12/11/2023					
<b>Matrix Spike Dup (BDL0321-MSD2)</b>										
Perchlorate	319		25.0	ug/L	250	68.0	100	80-120	1.56	20
					Source: MDK0735-08 Prepared: 12/8/2023 Analyzed: 12/12/2023					

## Quality Control Data

### Semivolatiles

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0072 - Explosives</b>										
<b>Blank (BDL0072-BLK1)</b>										
HMX	ND		0.500	ug/L						
RDX	ND		0.500	ug/L						
1,3,5-TNB	ND		0.500	ug/L						
1,3-Dinitrobenzene	ND		0.500	ug/L						
NB	ND		0.500	ug/L						
2,4,6-Trinitrotoluene	ND		0.500	ug/L						
Tetryl	ND		0.500	ug/L						
2,6-DNT	ND		0.500	ug/L						
2,4-Dinitrotoluene	ND		0.500	ug/L						
2-Nitrotoluene	ND		0.500	ug/L						
4-Nitrotoluene	ND		0.500	ug/L						
4-Amino-2,6-dinitrotoluene	ND		0.500	ug/L						
3-Nitrotoluene	ND		0.500	ug/L						
2-Amino-4,6-dinitrotoluene	ND		0.500	ug/L						
<i>Surrogate: 1,2-Dinitrobenzene</i>			9.80	ug/L	10.0		98.0	70-130		
<b>Blank (BDL0072-BLK2)</b>										
HMX	ND		0.500	ug/L						
RDX	ND		0.500	ug/L						
1,3,5-TNB	ND		0.500	ug/L						
					Prepared: 12/5/2023 Analyzed: 12/27/2023					

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## Quality Control Data (Continued)

### Semivolatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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#### Batch: BDL0072 - Explosives (Continued)

##### Blank (BDL0072-BLK2)

Prepared: 12/5/2023 Analyzed: 12/27/2023

1,3-Dinitrobenzene	ND		0.500	ug/L						
NB	ND		0.500	ug/L						
2,4,6-Trinitrotoluene	ND		0.500	ug/L						
Tetryl	ND		0.500	ug/L						
2,6-DNT	ND		0.500	ug/L						
2,4-Dinitrotoluene	ND		0.500	ug/L						
2-Nitrotoluene	ND		0.500	ug/L						
4-Nitrotoluene	ND		0.500	ug/L						
4-Amino-2,6-dinitrotoluene	ND		0.500	ug/L						
3-Nitrotoluene	ND		0.500	ug/L						
2-Amino-4,6-dinitrotoluene	ND		0.500	ug/L						
<i>Surrogate: 1,2-Dinitrobenzene</i>			<i>9.59</i>	<i>ug/L</i>	<i>10.0</i>		<i>95.9</i>	<i>70-130</i>		

##### LCS (BDL0072-BS1)

Prepared: 12/4/2023 Analyzed: 12/26/2023

HMX	4.63		0.500	ug/L	5.00		92.6	70-130		
RDX	5.12		0.500	ug/L	5.00		102	70-130		
1,3,5-TNB	4.38		0.500	ug/L	5.00		87.7	70-130		
1,3-Dinitrobenzene	4.65		0.500	ug/L	5.00		93.0	70-130		
NB	4.75		0.500	ug/L	5.00		95.1	70-130		
2,4,6-Trinitrotoluene	4.59		0.500	ug/L	5.00		91.9	70-130		
Tetryl	4.34		0.500	ug/L	5.00		86.7	70-130		
2,6-DNT	4.42		0.500	ug/L	5.00		88.4	70-130		
2,4-Dinitrotoluene	4.53		0.500	ug/L	5.00		90.6	70-130		
2-Nitrotoluene	4.68		0.500	ug/L	5.00		93.5	70-130		
4-Nitrotoluene	4.52		0.500	ug/L	5.00		90.4	70-130		
4-Amino-2,6-dinitrotoluene	4.36		0.500	ug/L	5.00		87.3	70-130		
3-Nitrotoluene	4.54		0.500	ug/L	5.00		90.8	70-130		
2-Amino-4,6-dinitrotoluene	4.51		0.500	ug/L	5.00		90.2	70-130		
<i>Surrogate: 1,2-Dinitrobenzene</i>			<i>8.60</i>	<i>ug/L</i>	<i>10.0</i>		<i>86.0</i>	<i>70-130</i>		

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## Quality Control Data (Continued)

### Semivolatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0072 - Explosives (Continued)</b>										
<b>LCS (BDL0072-BS2)</b>					Prepared: 12/5/2023 Analyzed: 12/27/2023					
HMX	4.58		0.500	ug/L	5.00		91.6	70-130		
RDX	4.59		0.500	ug/L	5.00		91.8	70-130		
1,3,5-TNB	4.47		0.500	ug/L	5.00		89.4	70-130		
1,3-Dinitrobenzene	4.65		0.500	ug/L	5.00		92.9	70-130		
NB	4.76		0.500	ug/L	5.00		95.2	70-130		
2,4,6-Trinitrotoluene	4.50		0.500	ug/L	5.00		90.0	70-130		
Tetryl	4.36		0.500	ug/L	5.00		87.1	70-130		
2,6-DNT	4.40		0.500	ug/L	5.00		88.0	70-130		
2,4-Dinitrotoluene	4.52		0.500	ug/L	5.00		90.3	70-130		
2-Nitrotoluene	5.02		0.500	ug/L	5.00		100	70-130		
4-Nitrotoluene	4.59		0.500	ug/L	5.00		91.9	70-130		
4-Amino-2,6-dinitrotoluene	4.77		0.500	ug/L	5.00		95.4	70-130		
3-Nitrotoluene	4.01		0.500	ug/L	5.00		80.3	70-130		
2-Amino-4,6-dinitrotoluene	4.49		0.500	ug/L	5.00		89.7	70-130		
<i>Surrogate: 1,2-Dinitrobenzene</i>			<i>8.31</i>	<i>ug/L</i>	<i>10.0</i>		<i>83.1</i>	<i>70-130</i>		

### Matrix Spike (BDL0072-MS1)

Source: MDK0709-10

Prepared: 12/4/2023 Analyzed: 12/26/2023

HMX	4.31		0.500	ug/L	5.00	ND	86.1	70-130		
RDX	4.74		0.500	ug/L	5.00	ND	94.8	70-130		
1,3,5-TNB	4.13		0.500	ug/L	5.00	ND	82.6	70-130		
1,3-Dinitrobenzene	4.32		0.500	ug/L	5.00	ND	86.4	70-130		
NB	4.41		0.500	ug/L	5.00	ND	88.1	70-130		
2,4,6-Trinitrotoluene	4.27		0.500	ug/L	5.00	ND	85.5	70-130		
Tetryl	4.21		0.500	ug/L	5.00	ND	84.2	70-130		
2,6-DNT	4.56		0.500	ug/L	5.00	ND	91.2	70-130		
2,4-Dinitrotoluene	4.24		0.500	ug/L	5.00	ND	84.8	70-130		
2-Nitrotoluene	4.75		0.500	ug/L	5.00	ND	94.9	70-130		
4-Nitrotoluene	4.61		0.500	ug/L	5.00	ND	92.2	70-130		
4-Amino-2,6-dinitrotoluene	4.36		0.500	ug/L	5.00	ND	87.2	70-130		
3-Nitrotoluene	4.67		0.500	ug/L	5.00	ND	93.3	70-130		
2-Amino-4,6-dinitrotoluene	4.50		0.500	ug/L	5.00	ND	90.1	70-130		
<i>Surrogate: 1,2-Dinitrobenzene</i>			<i>8.56</i>	<i>ug/L</i>	<i>10.0</i>		<i>85.6</i>	<i>70-130</i>		

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 504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

## Quality Control Data (Continued)

### Semivolatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0072 - Explosives (Continued)</b>										
<b>Matrix Spike (BDL0072-MS2)</b>			<b>Source: MDK0735-04</b>		Prepared: 12/4/2023		Analyzed: 12/27/2023			
HMX	4.62		0.500	ug/L	5.00	ND	92.3	70-130		
RDX	4.92		0.500	ug/L	5.00	ND	98.5	70-130		
1,3,5-TNB	4.46		0.500	ug/L	5.00	ND	89.3	70-130		
1,3-Dinitrobenzene	4.69		0.500	ug/L	5.00	ND	93.8	70-130		
NB	4.79		0.500	ug/L	5.00	ND	95.8	70-130		
2,4,6-Trinitrotoluene	4.57		0.500	ug/L	5.00	ND	91.4	70-130		
Tetryl	4.23		0.500	ug/L	5.00	ND	84.7	70-130		
2,6-DNT	4.42		0.500	ug/L	5.00	ND	88.4	70-130		
2,4-Dinitrotoluene	4.52		0.500	ug/L	5.00	ND	90.5	70-130		
2-Nitrotoluene	4.71		0.500	ug/L	5.00	ND	94.2	70-130		
4-Nitrotoluene	4.53		0.500	ug/L	5.00	ND	90.7	70-130		
4-Amino-2,6-dinitrotoluene	4.44		0.500	ug/L	5.00	ND	88.9	70-130		
3-Nitrotoluene	4.39		0.500	ug/L	5.00	ND	87.7	70-130		
2-Amino-4,6-dinitrotoluene	4.56		0.500	ug/L	5.00	ND	91.1	70-130		
<i>Surrogate: 1,2-Dinitrobenzene</i>			<i>8.73</i>	<i>ug/L</i>	<i>10.0</i>		<i>87.3</i>	<i>70-130</i>		
<hr/>										
<b>Matrix Spike Dup (BDL0072-MSD1)</b>			<b>Source: MDK0709-10</b>		Prepared: 12/4/2023		Analyzed: 12/26/2023			
HMX	4.21		0.500	ug/L	5.00	ND	84.2	70-130	2.19	25
RDX	4.67		0.500	ug/L	5.00	ND	93.4	70-130	1.54	25
1,3,5-TNB	4.05		0.500	ug/L	5.00	ND	81.0	70-130	1.95	25
1,3-Dinitrobenzene	4.28		0.500	ug/L	5.00	ND	85.5	70-130	1.06	25
NB	4.33		0.500	ug/L	5.00	ND	86.5	70-130	1.83	25
2,4,6-Trinitrotoluene	4.20		0.500	ug/L	5.00	ND	84.1	70-130	1.63	25
Tetryl	4.20		0.500	ug/L	5.00	ND	84.1	70-130	0.140	25
2,6-DNT	4.50		0.500	ug/L	5.00	ND	90.0	70-130	1.36	25
2,4-Dinitrotoluene	4.17		0.500	ug/L	5.00	ND	83.5	70-130	1.50	25
2-Nitrotoluene	4.62		0.500	ug/L	5.00	ND	92.4	70-130	2.69	25
4-Nitrotoluene	4.56		0.500	ug/L	5.00	ND	91.1	70-130	1.15	25
4-Amino-2,6-dinitrotoluene	4.25		0.500	ug/L	5.00	ND	85.0	70-130	2.64	25
3-Nitrotoluene	4.59		0.500	ug/L	5.00	ND	91.7	70-130	1.77	25
2-Amino-4,6-dinitrotoluene	4.44		0.500	ug/L	5.00	ND	88.8	70-130	1.42	25
<i>Surrogate: 1,2-Dinitrobenzene</i>			<i>8.42</i>	<i>ug/L</i>	<i>10.0</i>		<i>84.2</i>	<i>70-130</i>		

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 504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

## Quality Control Data (Continued)

### Semivolatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0072 - Explosives (Continued)</b>										
<b>Matrix Spike Dup (BDL0072-MSD2)</b>			<b>Source: MDK0735-04</b>		Prepared: 12/4/2023 Analyzed: 12/27/2023					
HMX	4.53		0.500	ug/L	5.00	ND	90.5	70-130	1.95	25
RDX	4.90		0.500	ug/L	5.00	ND	98.0	70-130	0.477	25
1,3,5-TNB	4.40		0.500	ug/L	5.00	ND	88.0	70-130	1.45	25
1,3-Dinitrobenzene	4.56		0.500	ug/L	5.00	ND	91.2	70-130	2.84	25
NB	4.67		0.500	ug/L	5.00	ND	93.3	70-130	2.59	25
2,4,6-Trinitrotoluene	4.53		0.500	ug/L	5.00	ND	90.6	70-130	0.928	25
Tetryl	4.23		0.500	ug/L	5.00	ND	84.6	70-130	0.0423	25
2,6-DNT	4.18		0.500	ug/L	5.00	ND	83.6	70-130	5.57	25
2,4-Dinitrotoluene	4.44		0.500	ug/L	5.00	ND	88.8	70-130	1.85	25
2-Nitrotoluene	4.63		0.500	ug/L	5.00	ND	92.7	70-130	1.60	25
4-Nitrotoluene	4.38		0.500	ug/L	5.00	ND	87.5	70-130	3.55	25
4-Amino-2,6-dinitrotoluene	4.31		0.500	ug/L	5.00	ND	86.3	70-130	2.97	25
3-Nitrotoluene	4.16		0.500	ug/L	5.00	ND	83.1	70-130	5.37	25
2-Amino-4,6-dinitrotoluene	4.30		0.500	ug/L	5.00	ND	86.1	70-130	5.73	25
<i>Surrogate: 1,2-Dinitrobenzene</i>			<i>8.18</i>	<i>ug/L</i>	<i>10.0</i>		<i>81.8</i>	<i>70-130</i>		

## Quality Control Data (Continued)

### Volatiles

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0196 - VOC</b>										
<b>Blank (BDL0196-BLK1)</b>			Prepared & Analyzed: 12/6/2023							
Acrylonitrile	ND		0.500	ug/L						
Acetone	ND		2.50	ug/L						
p-Chlorotoluene	ND		0.500	ug/L						
Benzene	ND		0.500	ug/L						
o-Chlorotoluene	ND		0.500	ug/L						
Carbon disulfide	ND		0.500	ug/L						
2,2-Dichloropropane	ND		0.500	ug/L						
2-hexanone	ND		2.50	ug/L						
Bromobenzene	ND		0.500	ug/L						
Bromochloromethane	ND		0.500	ug/L						
Bromodichloromethane	ND		0.500	ug/L						
Bromomethane	ND		0.500	ug/L						
Carbon Tetrachloride	ND		0.500	ug/L						
Chlorobenzene (Monochlorobenzene)	ND		0.500	ug/L						
Chloroform	ND		0.500	ug/L						
Chloroethane	ND		0.500	ug/L						
1,4-Dichlorobenzene (para-Dichlorobenzene)	ND		0.500	ug/L						
Bromoform	ND		0.500	ug/L						
1,2,4-Trimethylbenzene	ND		0.500	ug/L						
Chloromethane	ND		0.500	ug/L						
1,1,1,2-Tetrachloroethane	ND		0.500	ug/L						
1,1,2,2-Tetrachloroethane	ND		0.500	ug/L						
1,1,2-Trichloroethane	ND		0.500	ug/L						
1,1-Dichloroethane	ND		0.500	ug/L						
1,1-Dichloroethylene	ND		0.500	ug/L						

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 504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

## Quality Control Data (Continued)

### Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0196 - VOC (Continued)</b>										
<b>Blank (BDL0196-BLK1)</b>					Prepared & Analyzed: 12/6/2023					
1,1-Dichloropropene	ND		0.500	ug/L						
1,1,1-Trichloroethane	ND		0.500	ug/L						
1,2,3-Trichloropropane	ND		0.500	ug/L						
1,3-Dichloropropane	ND		0.500	ug/L						
DBCP (screening)	ND		0.500	ug/L						
EDB (screening)	ND		0.500	ug/L						
1,2-Dichlorobenzene (ortho-Dichlorobenzene)	ND		0.500	ug/L						
1,2-Dichloroethane	ND		0.500	ug/L						
1,2-Dichloropropane	ND		0.500	ug/L						
1,3,5-Trimethylbenzene	ND		0.500	ug/L						
m-Dichlorobenzene	ND		0.500	ug/L						
1,2,3-Trichlorobenzene	ND		0.500	ug/L						
Tetrachloroethylene	ND		0.500	ug/L						
1,2,4-Trichlorobenzene	ND		0.500	ug/L						
Vinyl Chloride	ND		0.500	ug/L						
Trichlorofluoromethane	ND		0.500	ug/L						
Trichloroethene	ND		0.500	ug/L						
trans-1,3-Dichloropropene	ND		0.500	ug/L						
trans-1,2 Dichloroethylene	ND		0.500	ug/L						
Toluene	ND		0.500	ug/L						
cis-1,2-Dichloroethylene	ND		0.500	ug/L						
tert-Butylbenzene	ND		0.500	ug/L						
Styrene	ND		0.500	ug/L						
sec-Butylbenzene	ND		0.500	ug/L						
p-isopropyltoluene	ND		0.500	ug/L						
o-Xylene (MCL for total)	ND		0.500	ug/L						
n-Propylbenzene	ND		0.500	ug/L						
Ethylbenzene	ND		0.500	ug/L						
n-Butylbenzene	ND		0.500	ug/L						
Dibromochloromethane	ND		0.500	ug/L						
Dichlorodifluoromethane	ND		0.500	ug/L						
cis-1,3-Dichloropropene	ND		0.500	ug/L						
Hexachlorobutadiene	ND		0.500	ug/L						
Isopropylbenzene	ND		0.500	ug/L						
m/p Xylenes (MCL for total)	ND		0.500	ug/L						
Methyl ethyl ketone (MEK)	ND		2.50	ug/L						
Methyl isobutyl ketone (MIBK)	ND		2.50	ug/L						
Methylene Chloride (Dichloromethane)	ND		2.50	ug/L						
methyl-t-butyl ether (MTBE)	ND		0.500	ug/L						
Naphthalene	ND		0.500	ug/L						
Dibromomethane	ND		0.500	ug/L						
<i>Surrogate: 4-Bromofluorobenzene</i>			19.5	ug/L	20.0		97.3	70-130		
<i>Surrogate: Toluene-d8</i>			20.7	ug/L	20.0		103	70-130		
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			20.7	ug/L	20.0		103	70-130		

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## Quality Control Data (Continued)

### Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0196 - VOC (Continued)</b>										
<b>LCS (BDL0196-BS1)</b>					Prepared & Analyzed: 12/6/2023					
Methyl ethyl ketone (MEK)	11.7		2.50	ug/L	10.0		117	55-154		
Dibromomethane	11.3		0.500	ug/L	10.0		113	80-120		
m/p Xylenes (MCL for total)	21.2		0.500	ug/L	20.0		106	80-120		
Isopropylbenzene	10.7		0.500	ug/L	10.0		107	80-120		
Hexachlorobutadiene	10.3		0.500	ug/L	10.0		103	80-120		
Ethylbenzene	10.4		0.500	ug/L	10.0		104	80-120		
Dichlorodifluoromethane	9.66		0.500	ug/L	10.0		96.6	57-130		
Dibromochloromethane	10.3		0.500	ug/L	10.0		103	80-121		
cis-1,3-Dichloropropene	10.6		0.500	ug/L	10.0		106	79-123		
cis-1,2-Dichloroethylene	11.2		0.500	ug/L	10.0		112	80-120		
Chloroform	11.2		0.500	ug/L	10.0		112	80-120		
Chloroethane	11.9		0.500	ug/L	10.0		119	78-120		
Carbon Tetrachloride	11.7		0.500	ug/L	10.0		117	80-120		
Methyl isobutyl ketone (MIBK)	11.2		2.50	ug/L	10.0		112	70-136		
Chlorobenzene (Monochlorobenzene)	10.4		0.500	ug/L	10.0		104	80-120		
Tetrachloroethylene	12.6	L5	0.500	ug/L	10.0		126	80-120		
Naphthalene	8.87		0.500	ug/L	10.0		88.7	66-133		
Vinyl Chloride	11.5		0.500	ug/L	10.0		115	75-120		
Carbon disulfide	11.7		0.500	ug/L	10.0		117	80-120		
Trichloroethene	11.4		0.500	ug/L	10.0		114	80-120		
trans-1,3-Dichloropropene	9.77		0.500	ug/L	10.0		97.7	69-130		
trans-1,2 Dichloroethylene	11.2		0.500	ug/L	10.0		112	80-120		
Trichlorofluoromethane	11.9		0.500	ug/L	10.0		119	61-140		
Toluene	11.2		0.500	ug/L	10.0		112	80-120		
methyl-t-butyl ether (MTBE)	10.8		0.500	ug/L	10.0		108	71-130		
tert-Butylbenzene	10.6		0.500	ug/L	10.0		106	80-120		
Styrene	9.77		0.500	ug/L	10.0		97.7	80-120		
sec-Butylbenzene	10.8		0.500	ug/L	10.0		108	80-120		
p-isopropyltoluene	10.7		0.500	ug/L	10.0		107	80-120		
o-Xylene (MCL for total)	10.5		0.500	ug/L	10.0		105	80-120		
n-Butylbenzene	10.6		0.500	ug/L	10.0		106	74-122		
1,1-Dichloropropene	11.4		0.500	ug/L	10.0		114	80-120		
1,2-Dichlorobenzene (ortho-Dichlorobenzene)	9.91		0.500	ug/L	10.0		99.1	80-120		
EDB (screening)	10.4		0.500	ug/L	10.0		104	70-130		
1,1,1-Trichloroethane	11.3		0.500	ug/L	10.0		113	80-120		
1,2,4-Trimethylbenzene	10.8		0.500	ug/L	10.0		108	80-120		
Bromoform	10.2		0.500	ug/L	10.0		102	68-133		
1,2,3-Trichlorobenzene	9.82		0.500	ug/L	10.0		98.2	78-120		
DBCP (screening)	9.91		0.500	ug/L	10.0		99.1	71-128		
1,1-Dichloroethylene	11.2		0.500	ug/L	10.0		112	70-129		
1,1-Dichloroethane	11.2		0.500	ug/L	10.0		112	80-120		
1,1,2-Trichloroethane	10.4		0.500	ug/L	10.0		104	80-120		
1,1,2,2-Tetrachloroethane	10.3		0.500	ug/L	10.0		103	77-123		
1,1,1,2-Tetrachloroethane	10.4		0.500	ug/L	10.0		104	80-120		
n-Propylbenzene	10.7		0.500	ug/L	10.0		107	80-120		
1,2,3-Trichloropropane	10.4		0.500	ug/L	10.0		104	80-120		
Benzene	11.2		0.500	ug/L	10.0		112	80-120		
Bromodichloromethane	11.3		0.500	ug/L	10.0		113	80-120		
Bromochloromethane	11.6		0.500	ug/L	10.0		116	80-120		
1,2,4-Trichlorobenzene	9.49		0.500	ug/L	10.0		94.9	80-120		

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## Quality Control Data (Continued)

### Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0196 - VOC (Continued)</b>										
<b>LCS (BDL0196-BS1)</b>			Prepared & Analyzed: 12/6/2023							
Bromobenzene	10.2		0.500	ug/L	10.0		102	80-120		
1,2-Dichloroethane	11.3		0.500	ug/L	10.0		113	80-120		
Acrylonitrile	12.2		0.500	ug/L	10.0		122	73-131		
p-Chlorotoluene	10.5		0.500	ug/L	10.0		105	80-124		
2-hexanone	9.85		2.50	ug/L	10.0		98.5	65-140		
2,2-Dichloropropane	11.1		0.500	ug/L	10.0		111	80-120		
1,4-Dichlorobenzene (para-Dichlorobenzene)	9.98		0.500	ug/L	10.0		99.8	80-120		
1,3-Dichloropropane	10.3		0.500	ug/L	10.0		103	80-120		
m-Dichlorobenzene	10.1		0.500	ug/L	10.0		101	80-120		
1,3,5-Trimethylbenzene	10.8		0.500	ug/L	10.0		108	80-121		
1,2-Dichloropropane	11.0		0.500	ug/L	10.0		110	80-120		
o-Chlorotoluene	10.6		0.500	ug/L	10.0		106	80-120		
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Surrogate: Toluene-d8			21.1	ug/L	20.0		105	70-130		
Surrogate: 4-Bromofluorobenzene			20.4	ug/L	20.0		102	70-130		
Surrogate: 1,2-Dichlorobenzene-d4			19.7	ug/L	20.0		98.6	70-130		

### Matrix Spike (BDL0196-MS1)

Source: MDL0102-01

Prepared & Analyzed: 12/6/2023

cis-1,3-Dichloropropene	10.9		0.500	ug/L	10.0	ND	109	74-124		
Methyl ethyl ketone (MEK)	11.2		2.50	ug/L	10.0	ND	112	47-165		
Carbon Tetrachloride	12.6		0.500	ug/L	10.0	ND	126	70-130		
m/p Xylenes (MCL for total)	21.6		0.500	ug/L	20.0	ND	108	57-130		
Isopropylbenzene	10.7		0.500	ug/L	10.0	ND	107	70-130		
Hexachlorobutadiene	10.0		0.500	ug/L	10.0	ND	100	70-130		
Ethylbenzene	10.6		0.500	ug/L	10.0	ND	106	70-130		
Dichlorodifluoromethane	10.5		0.500	ug/L	10.0	ND	105	57-136		
Chloroethane	12.5		0.500	ug/L	10.0	ND	125	68-138		
Dibromochloromethane	10.2		0.500	ug/L	10.0	ND	102	70-130		
cis-1,2-Dichloroethylene	11.7		0.500	ug/L	10.0	ND	117	70-130		
Chloroform	11.9		0.500	ug/L	10.0	ND	119	70-130		
Chlorobenzene (Monochlorobenzene)	10.5		0.500	ug/L	10.0	ND	105	70-130		
Dibromomethane	11.9		0.500	ug/L	10.0	ND	119	70-130		
Styrene	10.0		0.500	ug/L	10.0	ND	100	30-130		
Trichlorofluoromethane	12.8		0.500	ug/L	10.0	ND	128	50-154		
Trichloroethene	12.0		0.500	ug/L	10.0	ND	120	70-130		
1,2-Dichloropropane	11.6		0.500	ug/L	10.0	ND	116	70-130		
trans-1,3-Dichloropropene	9.78		0.500	ug/L	10.0	ND	97.8	61-131		
Carbon disulfide	12.6		0.500	ug/L	10.0	ND	126	70-130		
Toluene	11.8		0.500	ug/L	10.0	ND	118	70-130		
trans-1,2 Dichloroethylene	11.8		0.500	ug/L	10.0	ND	118	70-130		
tert-Butylbenzene	10.5		0.500	ug/L	10.0	ND	105	70-130		
Methyl isobutyl ketone (MIBK)	11.2		2.50	ug/L	10.0	ND	112	53-167		
sec-Butylbenzene	10.9		0.500	ug/L	10.0	ND	109	70-130		
p-isopropyltoluene	10.7		0.500	ug/L	10.0	ND	107	70-130		
o-Xylene (MCL for total)	10.5		0.500	ug/L	10.0	ND	105	62-127		
n-Propylbenzene	10.8		0.500	ug/L	10.0	ND	108	70-130		
n-Butylbenzene	10.6		0.500	ug/L	10.0	ND	106	67-130		
Naphthalene	8.35		0.500	ug/L	10.0	ND	83.5	56-147		
methyl-t-butyl ether (MTBE)	11.1		0.500	ug/L	10.0	ND	111	57-138		
Tetrachloroethylene	10.5		0.500	ug/L	10.0	ND	105	70-130		
1,1-Dichloropropene	12.1		0.500	ug/L	10.0	ND	121	70-130		

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## Quality Control Data (Continued)

### Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0196 - VOC (Continued)</b>										
<b>Matrix Spike (BDL0196-MS1)</b>			<b>Source: MDL0102-01</b>			<b>Prepared &amp; Analyzed: 12/6/2023</b>				
1,3,5-Trimethylbenzene	10.9		0.500	ug/L	10.0	ND	109	40-140		
EDB (screening)	10.7		0.500	ug/L	10.0	ND	107	70-130		
DBCP (screening)	9.56		0.500	ug/L	10.0	ND	95.6	55-146		
1,2,4-Trimethylbenzene	10.9		0.500	ug/L	10.0	ND	109	40-140		
1,2,4-Trichlorobenzene	9.28		0.500	ug/L	10.0	ND	92.8	70-130		
1,2,3-Trichlorobenzene	9.37		0.500	ug/L	10.0	ND	93.7	67-134		
1,2-Dichloroethane	11.8		0.500	ug/L	10.0	ND	118	70-130		
1,1-Dichloroethylene	12.0		0.500	ug/L	10.0	ND	120	70-130		
1,1-Dichloroethane	11.7		0.500	ug/L	10.0	ND	117	70-130		
1,1,2-Trichloroethane	10.5		0.500	ug/L	10.0	ND	105	70-130		
1,1,2,2-Tetrachloroethane	10.5		0.500	ug/L	10.0	ND	105	67-136		
1,1,1-Trichloroethane	12.0		0.500	ug/L	10.0	ND	120	70-130		
Vinyl Chloride	12.3		0.500	ug/L	10.0	ND	123	70-130		
1,2,3-Trichloropropane	10.5		0.500	ug/L	10.0	ND	105	69-137		
2-hexanone	10.0		2.50	ug/L	10.0	ND	100	43-175		
Bromodichloromethane	11.9		0.500	ug/L	10.0	ND	119	70-130		
Bromochloromethane	12.2		0.500	ug/L	10.0	ND	122	70-130		
Bromobenzene	10.1		0.500	ug/L	10.0	ND	101	70-130		
Benzene	11.8		0.500	ug/L	10.0	ND	118	70-130		
Acrylonitrile	11.0		0.500	ug/L	10.0	ND	110	65-137		
1,2-Dichlorobenzene (ortho-Dichlorobenzene)	9.99		0.500	ug/L	10.0	ND	99.9	70-130		
Bromoform	9.18		0.500	ug/L	10.0	ND	91.8	59-140		
o-Chlorotoluene	10.6		0.500	ug/L	10.0	ND	106	70-130		
2,2-Dichloropropane	11.9		0.500	ug/L	10.0	ND	119	70-130		
1,4-Dichlorobenzene (para-Dichlorobenzene)	10.1		0.500	ug/L	10.0	ND	101	70-130		
1,3-Dichloropropane	10.5		0.500	ug/L	10.0	ND	105	70-130		
m-Dichlorobenzene	10.2		0.500	ug/L	10.0	ND	102	70-130		
1,1,1,2-Tetrachloroethane	10.5		0.500	ug/L	10.0	ND	105	70-130		
p-Chlorotoluene	10.7		0.500	ug/L	10.0	ND	107	70-130		
-----										
Surrogate: Toluene-d8			21.3	ug/L	20.0		107	70-130		
Surrogate: 4-Bromofluorobenzene			20.4	ug/L	20.0		102	70-130		
Surrogate: 1,2-Dichlorobenzene-d4			19.5	ug/L	20.0		97.7	70-130		

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## Quality Control Data (Continued)

### Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0196 - VOC (Continued)</b>										
<b>Matrix Spike Dup (BDL0196-MSD1)</b>			<b>Source: MDL0102-01</b>			<b>Prepared &amp; Analyzed: 12/6/2023</b>				
1,2-Dichloropropane	9.79		0.500	ug/L	10.0	ND	97.9	70-130	16.5	20
p-Chlorotoluene	8.94		0.500	ug/L	10.0	ND	89.4	70-130	17.5	20
Carbon disulfide	10.4		0.500	ug/L	10.0	ND	104	70-130	19.3	20
1,3-Dichloropropane	8.89		0.500	ug/L	10.0	ND	88.9	70-130	16.7	20
1,4-Dichlorobenzene (para-Dichlorobenzene)	8.74		0.500	ug/L	10.0	ND	87.4	70-130	14.7	20
2,2-Dichloropropane	10.0		0.500	ug/L	10.0	ND	100	70-130	17.3	20
o-Chlorotoluene	8.92		0.500	ug/L	10.0	ND	89.2	70-130	16.8	20
1,2-Dichloroethane	10.0		0.500	ug/L	10.0	ND	100	70-130	16.3	20
Acrylonitrile	10.1		0.500	ug/L	10.0	ND	101	65-137	8.27	20
Benzene	9.83		0.500	ug/L	10.0	ND	98.3	70-130	18.1	20
Bromobenzene	8.75		0.500	ug/L	10.0	ND	87.5	70-130	14.0	20
Bromochloromethane	10.3		0.500	ug/L	10.0	ND	103	70-130	16.9	20
Bromodichloromethane	10.0		0.500	ug/L	10.0	ND	100	70-130	16.7	20
m-Dichlorobenzene	8.67		0.500	ug/L	10.0	ND	86.7	70-130	16.1	20
2-hexanone	8.84		2.50	ug/L	10.0	ND	88.4	43-175	12.5	20
1,2,3-Trichlorobenzene	8.24		0.500	ug/L	10.0	ND	82.4	67-134	12.8	20
1,1,1,2-Tetrachloroethane	8.95		0.500	ug/L	10.0	ND	89.5	70-130	15.6	20
1,1,1-Trichloroethane	10.1		0.500	ug/L	10.0	ND	101	70-130	17.7	20
1,1,2,2-Tetrachloroethane	9.14		0.500	ug/L	10.0	ND	91.4	67-136	13.9	20
1,1,2-Trichloroethane	8.98		0.500	ug/L	10.0	ND	89.8	70-130	15.9	20
1,1-Dichloroethane	9.90		0.500	ug/L	10.0	ND	99.0	70-130	16.9	20
1,3,5-Trimethylbenzene	9.11		0.500	ug/L	10.0	ND	91.1	40-140	17.7	20
1,1-Dichloropropene	10.1		0.500	ug/L	10.0	ND	101	70-130	18.5	20
Carbon Tetrachloride	10.3		0.500	ug/L	10.0	ND	103	70-130	19.8	20
1,2,3-Trichloropropane	8.98		0.500	ug/L	10.0	ND	89.8	69-137	15.6	20
1,2,4-Trichlorobenzene	7.96		0.500	ug/L	10.0	ND	79.6	70-130	15.3	20
1,2,4-Trimethylbenzene	9.18		0.500	ug/L	10.0	ND	91.8	40-140	16.9	20
DBCP (screening)	8.30		0.500	ug/L	10.0	ND	83.0	55-146	14.1	20
EDB (screening)	8.89		0.500	ug/L	10.0	ND	88.9	70-130	18.1	20
1,2-Dichlorobenzene (ortho-Dichlorobenzene)	8.46		0.500	ug/L	10.0	ND	84.6	70-130	16.6	20
1,1-Dichloroethylene	9.90		0.500	ug/L	10.0	ND	99.0	70-130	19.0	20
Tetrachloroethylene	8.74		0.500	ug/L	10.0	ND	87.4	70-130	18.2	20
Bromoform	7.81		0.500	ug/L	10.0	ND	78.1	59-140	16.1	20
n-Propylbenzene	9.07		0.500	ug/L	10.0	ND	90.7	70-130	17.4	20
o-Xylene (MCL for total)	8.87		0.500	ug/L	10.0	ND	88.7	62-127	16.7	20
p-isopropyltoluene	9.02		0.500	ug/L	10.0	ND	90.2	70-130	16.8	20
sec-Butylbenzene	9.13		0.500	ug/L	10.0	ND	91.3	70-130	17.2	20
Naphthalene	7.43		0.500	ug/L	10.0	ND	74.3	56-147	11.7	20
tert-Butylbenzene	8.98		0.500	ug/L	10.0	ND	89.8	70-130	15.7	20
methyl-t-butyl ether (MTBE)	9.65		0.500	ug/L	10.0	ND	96.5	57-138	14.2	20
Toluene	9.89		0.500	ug/L	10.0	ND	98.9	70-130	17.9	20
trans-1,2 Dichloroethylene	9.86		0.500	ug/L	10.0	ND	98.6	70-130	17.9	20
trans-1,3-Dichloropropene	8.35		0.500	ug/L	10.0	ND	83.5	61-131	15.8	20
Trichloroethene	10.2		0.500	ug/L	10.0	ND	102	70-130	16.2	20
Trichlorofluoromethane	10.6		0.500	ug/L	10.0	ND	106	50-154	18.7	20
Styrene	8.35		0.500	ug/L	10.0	ND	83.5	30-130	18.3	20
Dichlorodifluoromethane	8.77		0.500	ug/L	10.0	ND	87.7	57-136	17.5	20
Chlorobenzene (Monochlorobenzene)	8.78		0.500	ug/L	10.0	ND	87.8	70-130	18.2	20
Chloroethane	10.3		0.500	ug/L	10.0	ND	103	68-138	19.4	20
Chloroform	9.98		0.500	ug/L	10.0	ND	99.8	70-130	17.9	20

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## Quality Control Data (Continued)

### Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0196 - VOC (Continued)</b>										
<b>Matrix Spike Dup (BDL0196-MSD1)</b>			<b>Source: MDL0102-01</b>			Prepared & Analyzed: 12/6/2023				
cis-1,2-Dichloroethylene	9.92		0.500	ug/L	10.0	ND	99.2	70-130	16.2	20
cis-1,3-Dichloropropene	9.33		0.500	ug/L	10.0	ND	93.3	74-124	15.3	20
n-Butylbenzene	8.86		0.500	ug/L	10.0	ND	88.6	67-130	17.8	20
Dibromomethane	10.2		0.500	ug/L	10.0	ND	102	70-130	15.6	20
Vinyl Chloride	10.3		0.500	ug/L	10.0	ND	103	70-130	17.3	20
Ethylbenzene	8.86		0.500	ug/L	10.0	ND	88.6	70-130	17.4	20
Hexachlorobutadiene	8.64		0.500	ug/L	10.0	ND	86.4	70-130	14.6	20
Isopropylbenzene	9.03		0.500	ug/L	10.0	ND	90.3	70-130	17.3	20
m/p Xylenes (MCL for total)	18.0		0.500	ug/L	20.0	ND	89.9	57-130	18.3	20
Methyl ethyl ketone (MEK)	9.89		2.50	ug/L	10.0	ND	98.9	47-165	12.7	20
Methyl isobutyl ketone (MIBK)	9.70		2.50	ug/L	10.0	ND	97.0	53-167	13.9	20
Dibromochloromethane	8.55		0.500	ug/L	10.0	ND	85.5	70-130	17.5	20
-----										
Surrogate: 4-Bromofluorobenzene			20.5	ug/L	20.0		103	70-130		
Surrogate: Toluene-d8			21.5	ug/L	20.0		107	70-130		
Surrogate: 1,2-Dichlorobenzene-d4			19.6	ug/L	20.0		97.8	70-130		



**Chain of Custody Record**

MDL0102



(208) 883-2839  
(509) 838-3999

Due: 12/19/23

**& Reporting**

around times at  
pricing-lists

- Normal  Phone  
 Next Day\*  Email  
 2nd Day\* \*All rush order requests must  
 Other\* have prior approval

Company Name: PBS Engineering and Environmental		Project Manager: Scott Braunsten	
Address: 4412 S Corbett Ave		Project Name & #: Camp Bonneville, 76151.012	
City: Portland	State: OR	Zip: 97239	
Phone: 503-248-1939		Purchase Order #:	
Email Address(es): scott.braunsten@pbsusa.com, samantha.eckes@pbsusa.com		Sampler Name & Phone: D. Rukki + R. Martin 646-734-9677	

				List Analyses Requested					Note Special Instructions/Comments		
Lab ID	Sample Identification	Sampling Date/Time	Matrix	Preservative:							
				# of Containers	Sample Volume	VOCs by 8260B	Explosives by 8330	Purge/Headspace by 8850			
	04023L4M409AW	12-1-23 / 945	H2O	6		X	X	X			Please send login confirmation Please provide EQUIS EDD + WA EIM <i>Run Data Package III</i>
	04023L4M409BW	↓ / 1045	↓	6		X	X	X			

Inspection Checklist		
Received Intact?	Y	N
Labels & Chains Agree?	Y	N
Containers Sealed?	Y	N
No VOC Head Space?	Y	N
Cooler?	Y	N
Ice/Ice Packs Present?	Y	N

	Printed Name	Signature	Company	Date	Time
Relinquished by	David Rukki	<i>David Rukki</i>	PBS	12-4-23	1245
Received by	TB			12/5/23	11:36
Relinquished by					
Received by					
Relinquished by					
Received by					

Temperature (°C): \_\_\_\_\_

Number of Containers: \_\_\_\_\_

Shipped Via: \_\_\_\_\_

Preservative: \_\_\_\_\_

Date & Time: \_\_\_\_\_

Inspected By: \_\_\_\_\_

Samples submitted to Anatek Labs may be subcontracted to other accredited labs if necessary. This message serves as notice of this possibility. Subcontracted analyses will be clearly noted on the analytical report.



Anatek Labs, Inc.

### Sample Receipt and Preservation Form

Client Name: PBS

TAT: Normal RUSH: \_\_\_\_\_ days

Samples Received From: FedEx UPS USPS Client Courier Other: \_\_\_\_\_

Custody Seal on Cooler/Box: Yes No Custody Seals Intact: Yes No N/A

Number of Coolers/Boxes: \_\_\_\_\_ Type of Ice: Wet Ice Ice Packs Dry Ice None

Packing Material: Bubble Wrap Bags Foam/Peanuts Paper None Other: \_\_\_\_\_

Cooler Temp As Read (°C): 4.1 Cooler Temp Corrected (°C): — Thermometer Used: IR-5

Comments:

Samples Received Intact?	<u>Yes</u>	No	N/A
Chain of Custody Present/Complete?	<u>Yes</u>	No	N/A
Labels and Chains Agree?	<u>Yes</u>	No	N/A
Samples Received Within Hold Time?	<u>Yes</u>	No	N/A
Correct Containers Received?	<u>Yes</u>	No	N/A
Anatek Bottles Used?	<u>Yes</u>	No	Unknown
Total Number of Sample Bottles Received:	<u>12</u>		


Samples Properly Preserved?	<u>Yes</u>	No	N/A
<i>If No, record preservation and pH-after details</i>			
VOC Vials Free of Headspace (<6mm)?	<u>Yes</u>	No	N/A
VOC Trip Blanks Present?	<u>Yes</u>	No	N/A

Initial pH:	pH Paper ID:
<2 or	

Record preservatives (and lot numbers, if known) for containers below:

61L Exp1 x4  
644 HCl VOC 8260 x6  
P250 Perc x2

Notes, comments, etc. (also use this space if contacting the client - record names and date/time)

Received/Inspected By: TB Date/Time: 12/5/23 11:56

Form F19.01 - Eff 1 Dec 2022

Page 1 of 1

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**Client:** PBS Engineering - Portland  
**Address:** 4412 SW Corbett Ave  
Portland, OR 97239  
**Attn:** Scott Braunsten

**Work Order:** MDL0103  
**Project:** Camp Bonneville, 76151.012  
**Reported:** 4/4/2024 09:17

## Analytical Results Report

**Sample Location:** 04Q23L4MW08BW  
**Lab/Sample Number:** MDL0103-01      **Collect Date:** 12/01/23 12:00  
**Date Received:** 12/05/23 11:56      **Collected By:** D.Rukki, R.Martin  
**Matrix:** Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Inorganics</b>							
Perchlorate	139	ug/L	25.0	12/12/23 11:44	GPB	EPA 6850	
<b>Semivolatiles</b>							
1,3,5-TNB	ND	ug/L	0.500	12/27/23 20:06	MER	EPA 8330B	
1,3-Dinitrobenzene	ND	ug/L	0.500	12/27/23 20:06	MER	EPA 8330B	
2,4,6-Trinitrotoluene	ND	ug/L	0.100	12/27/23 20:06	MER	EPA 8330B	
2,4-Dinitrotoluene	ND	ug/L	0.100	12/27/23 20:06	MER	EPA 8330B	
2,6-DNT	ND	ug/L	0.500	12/27/23 20:06	MER	EPA 8330B	
2-Amino-4,6-dinitrotoluene	ND	ug/L	0.500	12/27/23 20:06	MER	EPA 8330B	
2-Nitrotoluene	ND	ug/L	0.500	12/27/23 20:06	MER	EPA 8330B	
3-Nitrotoluene	ND	ug/L	0.500	12/27/23 20:06	MER	EPA 8330B	
4-Amino-2,6-dinitrotoluene	ND	ug/L	0.500	12/27/23 20:06	MER	EPA 8330B	
4-Nitrotoluene	ND	ug/L	0.500	12/27/23 20:06	MER	EPA 8330B	
HMX	ND	ug/L	0.100	12/27/23 20:06	MER	EPA 8330B	
NB	ND	ug/L	0.500	12/27/23 20:06	MER	EPA 8330B	
RDX	0.293	ug/L	0.100	12/27/23 20:06	MER	EPA 8330B	
Tetryl	ND	ug/L	0.500	12/27/23 20:06	MER	EPA 8330B	
<hr/>							
<i>Surrogate: 1,2-Dinitrobenzene</i>	<i>82.7%</i>		<i>70-130</i>	<i>12/27/23 20:06</i>	<i>MER</i>	<i>EPA 8330B</i>	
<b>Volatiles</b>							
1,1,1,2-Tetrachloroethane	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
1,1,1-Trichloroethane	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
1,1,1,2,2-Tetrachloroethane	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
1,1,2-Trichloroethane	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
1,1-Dichloroethane	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
1,1-Dichloroethene	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
1,1-dichloropropene	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
1,2,3-Trichlorobenzene	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
1,2,3-Trichloropropane	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
1,2,4-Trichlorobenzene	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
1,2,4-Trimethylbenzene	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
1,2-Dibromo-3-chloropropane (DBCP)	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
1,2-Dichlorobenzene	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
1,2-Dichloroethane	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
1,2-Dichloropropane	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	

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Sample Location: 04Q23L4MW08BW  
Lab/Sample Number: MDL0103-01 Collect Date: 12/01/23 12:00  
Date Received: 12/05/23 11:56 Collected By: D.Rukki, R.Martin  
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Volatiles (Continued)</b>							
1,3,5-Trimethylbenzene	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
1,3-Dichlorobenzene	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
1,3-Dichloropropane	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
1,4-Dichlorobenzene	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
2,2-Dichloropropane	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
2-Chlorotoluene	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
2-hexanone	ND	ug/L	2.50	12/6/23 11:31	BKP	EPA 8260D	
4-Chlorotoluene	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
Acetone	ND	ug/L	2.50	12/6/23 11:31	BKP	EPA 8260D	
Acrylonitrile	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
Benzene	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
Bromobenzene	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
Bromochloromethane	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
Bromodichloromethane	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
Bromoform	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
Bromomethane	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
Carbon disulfide	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
Carbon Tetrachloride	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
Chlorobenzene	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
Chloroethane	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
Chloroform	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
Chloromethane	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
cis-1,2-dichloroethene	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
cis-1,3-Dichloropropene	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
Dibromochloromethane	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
Dibromomethane	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
Dichlorodifluoromethane	1.49	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
Ethylbenzene	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
Hexachlorobutadiene	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
Isopropylbenzene	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
m+p-Xylene	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
Methyl ethyl ketone (MEK)	ND	ug/L	2.50	12/6/23 11:31	BKP	EPA 8260D	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.50	12/6/23 11:31	BKP	EPA 8260D	
Methylene chloride	ND	ug/L	2.50	12/6/23 11:31	BKP	EPA 8260D	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
Naphthalene	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
n-Butylbenzene	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
n-Propylbenzene	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
o-Xylene	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
p-isopropyltoluene	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
sec-Butylbenzene	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
Styrene	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
tert-Butylbenzene	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
Tetrachloroethene	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
Toluene	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
trans-1,2-Dichloroethene	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
trans-1,3-Dichloropropene	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	

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Sample Location: 04Q23L4MW08BW  
Lab/Sample Number: MDL0103-01 Collect Date: 12/01/23 12:00  
Date Received: 12/05/23 11:56 Collected By: D.Rukki, R.Martin  
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Volatiles (Continued)</b>							
Trichloroethene	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
Trichlorofluoromethane	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
Vinyl Chloride	ND	ug/L	0.500	12/6/23 11:31	BKP	EPA 8260D	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>102%</i>		<i>70-130</i>	<i>12/6/23 11:31</i>	<i>BKP</i>	<i>EPA 8260D</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98.7%</i>		<i>70-130</i>	<i>12/6/23 11:31</i>	<i>BKP</i>	<i>EPA 8260D</i>	
<i>Surrogate: Toluene-d8</i>	<i>104%</i>		<i>70-130</i>	<i>12/6/23 11:31</i>	<i>BKP</i>	<i>EPA 8260D</i>	

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Sample Location: 04Q23L4MW08AW  
Lab/Sample Number: MDL0103-02 Collect Date: 12/01/23 12:45  
Date Received: 12/05/23 11:56 Collected By: D.Rukki, R.Martin  
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Inorganics</b>							
Perchlorate	78.0	ug/L	25.0	12/12/23 11:51	GPB	EPA 6850	
<b>Semivolatiles</b>							
1,3,5-TNB	ND	ug/L	0.500	12/27/23 20:43	MER	EPA 8330B	
1,3-Dinitrobenzene	ND	ug/L	0.500	12/27/23 20:43	MER	EPA 8330B	
2,4,6-Trinitrotoluene	ND	ug/L	0.100	12/27/23 20:43	MER	EPA 8330B	
2,4-Dinitrotoluene	ND	ug/L	0.100	12/27/23 20:43	MER	EPA 8330B	
2,6-DNT	ND	ug/L	0.500	12/27/23 20:43	MER	EPA 8330B	
2-Amino-4,6-dinitrotoluene	ND	ug/L	0.500	12/27/23 20:43	MER	EPA 8330B	
2-Nitrotoluene	ND	ug/L	0.500	12/27/23 20:43	MER	EPA 8330B	
3-Nitrotoluene	ND	ug/L	0.500	12/27/23 20:43	MER	EPA 8330B	
4-Amino-2,6-dinitrotoluene	ND	ug/L	0.500	12/27/23 20:43	MER	EPA 8330B	
4-Nitrotoluene	ND	ug/L	0.500	12/27/23 20:43	MER	EPA 8330B	
HMX	1.24	ug/L	0.100	12/27/23 20:43	MER	EPA 8330B	
NB	ND	ug/L	0.500	12/27/23 20:43	MER	EPA 8330B	
RDX	26.6	ug/L	0.100	12/27/23 20:43	MER	EPA 8330B	
Tetryl	ND	ug/L	0.500	12/27/23 20:43	MER	EPA 8330B	
<i>Surrogate: 1,2-Dinitrobenzene</i>	<i>80.9%</i>		<i>70-130</i>	<i>12/27/23 20:43</i>	<i>MER</i>	<i>EPA 8330B</i>	
<b>Volatiles</b>							
1,1,1,2-Tetrachloroethane	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
1,1,1-Trichloroethane	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
1,1,1-Trichloroethane	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
1,1-Dichloroethane	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
1,1-Dichloroethene	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
1,1-dichloropropene	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
1,2,3-Trichlorobenzene	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
1,2,3-Trichloropropane	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
1,2,4-Trichlorobenzene	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
1,2,4-Trimethylbenzene	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
1,2-Dibromo-3-chloropropane (DBCP)	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
1,2-Dichlorobenzene	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
1,2-Dichloroethane	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
1,2-Dichloropropane	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
1,3,5-Trimethylbenzene	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
1,3-Dichlorobenzene	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
1,3-Dichloropropane	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
1,4-Dichlorobenzene	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
2,2-Dichloropropane	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
2-Chlorotoluene	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
2-hexanone	ND	ug/L	2.50	12/6/23 12:00	BKP	EPA 8260D	
4-Chlorotoluene	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
Acetone	2.54	ug/L	2.50	12/6/23 12:00	BKP	EPA 8260D	
Acrylonitrile	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	

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Sample Location: 04Q23L4MW08AW  
 Lab/Sample Number: MDL0103-02 Collect Date: 12/01/23 12:45  
 Date Received: 12/05/23 11:56 Collected By: D.Rukki, R.Martin  
 Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Volatiles (Continued)</b>							
Benzene	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
Bromobenzene	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
Bromochloromethane	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
Bromodichloromethane	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
Bromoform	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
Bromomethane	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
Carbon disulfide	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
Carbon Tetrachloride	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
Chlorobenzene	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
Chloroethane	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
Chloroform	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
Chloromethane	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
cis-1,2-dichloroethene	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
cis-1,3-Dichloropropene	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
Dibromochloromethane	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
Dibromomethane	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
Dichlorodifluoromethane	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
Ethylbenzene	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
Hexachlorobutadiene	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
Isopropylbenzene	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
m+p-Xylene	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
Methyl ethyl ketone (MEK)	ND	ug/L	2.50	12/6/23 12:00	BKP	EPA 8260D	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.50	12/6/23 12:00	BKP	EPA 8260D	
Methylene chloride	ND	ug/L	2.50	12/6/23 12:00	BKP	EPA 8260D	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
Naphthalene	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
n-Butylbenzene	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
n-Propylbenzene	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
o-Xylene	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
p-isopropyltoluene	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
sec-Butylbenzene	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
Styrene	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
tert-Butylbenzene	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
Tetrachloroethene	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
Toluene	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
trans-1,2-Dichloroethene	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
trans-1,3-Dichloropropene	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
Trichloroethene	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
Trichlorofluoromethane	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
Vinyl Chloride	ND	ug/L	0.500	12/6/23 12:00	BKP	EPA 8260D	
<hr/>							
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	104%		70-130	12/6/23 12:00	BKP	EPA 8260D	
<hr/>							
<i>Surrogate: 4-Bromofluorobenzene</i>	98.1%		70-130	12/6/23 12:00	BKP	EPA 8260D	
<hr/>							
<i>Surrogate: Toluene-d8</i>	105%		70-130	12/6/23 12:00	BKP	EPA 8260D	

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Sample Location: 120123TB  
Lab/Sample Number: MDL0103-03 Collect Date: 12/01/23 00:00  
Date Received: 12/05/23 11:56 Collected By:  
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Volatiles</b>							
1,1,1,2-Tetrachloroethane	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
1,1,1-Trichloroethane	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
1,1,2-Trichloroethane	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
1,1-Dichloroethane	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
1,1-Dichloroethene	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
1,1-dichloropropene	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
1,2,3-Trichlorobenzene	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
1,2,3-Trichloropropane	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
1,2,4-Trichlorobenzene	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
1,2,4-Trimethylbenzene	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
1,2-Dibromo-3-chloropropane (DBCP)	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	ug/L	0.200	12/6/23 12:29	BKP	EPA 8260D	
1,2-Dichlorobenzene	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
1,2-Dichloroethane	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
1,2-Dichloropropane	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
1,3,5-Trimethylbenzene	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
1,3-Dichlorobenzene	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
1,3-Dichloropropane	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
1,4-Dichlorobenzene	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
2,2-Dichloropropane	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
2-Chloroethyl vinyl ether	ND	ug/L	2.50	12/6/23 12:29	BKP	EPA 8260D	
2-Chlorotoluene	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
2-hexanone	ND	ug/L	2.50	12/6/23 12:29	BKP	EPA 8260D	
4-Chlorotoluene	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
Acetone	ND	ug/L	2.50	12/6/23 12:29	BKP	EPA 8260D	
Acrolein	ND	ug/L	2.50	12/6/23 12:29	BKP	EPA 8260D	
Acrylonitrile	ND	ug/L	2.50	12/6/23 12:29	BKP	EPA 8260D	
Benzene	ND	ug/L	0.200	12/6/23 12:29	BKP	EPA 8260D	
Bromobenzene	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
Bromochloromethane	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
Bromodichloromethane	ND	ug/L	0.200	12/6/23 12:29	BKP	EPA 8260D	
Bromoform	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
Bromomethane	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
Carbon disulfide	ND	ug/L	2.50	12/6/23 12:29	BKP	EPA 8260D	
Carbon Tetrachloride	ND	ug/L	0.200	12/6/23 12:29	BKP	EPA 8260D	
Chlorobenzene	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
Chloroethane	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
Chloroform	ND	ug/L	0.200	12/6/23 12:29	BKP	EPA 8260D	
Chloromethane	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
cis-1,2-dichloroethene	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
cis-1,3-Dichloropropene	ND	ug/L	0.200	12/6/23 12:29	BKP	EPA 8260D	
Dibromochloromethane	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
Dibromomethane	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
Dichlorodifluoromethane	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
Ethylbenzene	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
Hexachlorobutadiene	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	

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Sample Location: 120123TB  
 Lab/Sample Number: MDL0103-03 Collect Date: 12/01/23 00:00  
 Date Received: 12/05/23 11:56 Collected By:  
 Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
<b>Volatiles (Continued)</b>							
Isopropylbenzene	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
m+p-Xylene	ND	ug/L	1.00	12/6/23 12:29	BKP	EPA 8260D	
Methyl ethyl ketone (MEK)	ND	ug/L	2.50	12/6/23 12:29	BKP	EPA 8260D	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.50	12/6/23 12:29	BKP	EPA 8260D	
Methylene chloride	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
Naphthalene	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
n-Butylbenzene	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
n-Propylbenzene	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
o-Xylene	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
p-isopropyltoluene	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
sec-Butylbenzene	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
Styrene	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
tert-Butylbenzene	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
Tetrachloroethene	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
Toluene	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
trans-1,2-Dichloroethene	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
trans-1,3-Dichloropropene	ND	ug/L	0.200	12/6/23 12:29	BKP	EPA 8260D	
trans-1-4-Dichloro-2-butene	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
Trichloroethene	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
Trichlorofluoromethane	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
Vinyl acetate	ND	ug/L	0.500	12/6/23 12:29	BKP	EPA 8260D	
Vinyl Chloride	ND	ug/L	0.200	12/6/23 12:29	BKP	EPA 8260D	
<hr/>							
Surrogate: 1,2-Dichlorobenzene-d4	103%		70-130	12/6/23 12:29	BKP	EPA 8260D	
<hr/>							
Surrogate: 4-Bromofluorobenzene	99.8%		70-130	12/6/23 12:29	BKP	EPA 8260D	
<hr/>							
Surrogate: Toluene-d8	104%		70-130	12/6/23 12:29	BKP	EPA 8260D	

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Authorized Signature,



Justin Doty For Todd Taruscio, Laboratory Manager

L5	The associated blank spike recovery was above laboratory/method acceptance limits. This analyte was not detected in the sample
PQL	Practical Quantitation Limit
ND	Not Detected
MCL	EPA's Maximum Contaminant Level
Dry	Sample results reported on a dry weight basis
*	Not a state-certified analyte
RPD	Relative Percent Difference
%REC	Percent Recovery
Source	Sample that was spiked or duplicated.

This report shall not be reproduced except in full, without the written approval of the laboratory  
The results reported related only to the samples indicated.

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## **Certifications**

<b>Code</b>	<b>Description</b>	<b>Facility</b>	<b>Number</b>
DOE WA	Washington Department of Ecology	Anatek-Moscow, ID	C595

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## Quality Control Data

### Inorganics

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0321 - Perchlorate</b>										
<b>Blank (BDL0321-BLK1)</b>										
Perchlorate	ND		1.00	ug/L						
					Prepared: 12/08/23 07:47- Analyzed: 12/11/23 10:44					
<b>Blank (BDL0321-BLK2)</b>										
Perchlorate	ND		1.00	ug/L						
					Prepared: 12/08/23 07:47- Analyzed: 12/12/23 19:33					
<b>LCS (BDL0321-BS1)</b>										
Perchlorate	5.23		1.00	ug/L	5.00		105	80-120		
					Prepared: 12/08/23 07:47- Analyzed: 12/11/23 10:51					
<b>LCS (BDL0321-BS2)</b>										
Perchlorate	4.69		1.00	ug/L	5.00		93.8	80-120		
					Prepared: 12/08/23 07:47- Analyzed: 12/12/23 19:40					
<b>Matrix Spike (BDL0321-MS1)</b>										
			<b>Source: MDK0709-01</b>		Prepared: 12/08/23 07:47- Analyzed: 12/11/23 11:28					
Perchlorate	5.20		1.00	ug/L	5.00	ND	104	80-120		
<b>Matrix Spike (BDL0321-MS2)</b>										
			<b>Source: MDK0735-08</b>		Prepared: 12/08/23 07:47- Analyzed: 12/12/23 10:17					
Perchlorate	324		50.0	ug/L	250	68.0	102	80-120		
<b>Matrix Spike Dup (BDL0321-MSD1)</b>										
			<b>Source: MDK0709-01</b>		Prepared: 12/08/23 07:47- Analyzed: 12/11/23 11:35					
Perchlorate	5.35		1.00	ug/L	5.00	ND	107	80-120	2.84	20
<b>Matrix Spike Dup (BDL0321-MSD2)</b>										
			<b>Source: MDK0735-08</b>		Prepared: 12/08/23 07:47- Analyzed: 12/12/23 10:24					
Perchlorate	319		50.0	ug/L	250	68.0	100	80-120	1.56	20

## Quality Control Data

### Semivolatiles

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0072 - Explosives</b>										
<b>Blank (BDL0072-BLK1)</b>										
					Prepared: 12/04/23 07:53- Analyzed: 12/26/23 21:01					
HMX	ND		0.500	ug/L						
RDX	ND		0.500	ug/L						
1,3,5-TNB	ND		0.500	ug/L						
1,3-Dinitrobenzene	ND		0.500	ug/L						
NB	ND		0.500	ug/L						
2,4,6-Trinitrotoluene	ND		0.500	ug/L						
Tetryl	ND		0.500	ug/L						
2,6-DNT	ND		0.500	ug/L						
2,4-Dinitrotoluene	ND		0.500	ug/L						
2-Nitrotoluene	ND		0.500	ug/L						
4-Nitrotoluene	ND		0.500	ug/L						
4-Amino-2,6-dinitrotoluene	ND		0.500	ug/L						
3-Nitrotoluene	ND		0.500	ug/L						
2-Amino-4,6-dinitrotoluene	ND		0.500	ug/L						
<i>Surrogate: 1,2-Dinitrobenzene</i>			<i>9.80</i>	<i>ug/L</i>	<i>10.0</i>		<i>98.0</i>	<i>70-130</i>		

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## Quality Control Data (Continued)

### Semivolatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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### Batch: BDL0072 - Explosives (Continued)

#### Blank (BDL0072-BLK2)

Prepared: 12/05/23 13:00- Analyzed: 12/27/23 17:36

HMX	ND		0.500	ug/L						
RDX	ND		0.500	ug/L						
1,3,5-TNB	ND		0.500	ug/L						
1,3-Dinitrobenzene	ND		0.500	ug/L						
NB	ND		0.500	ug/L						
2,4,6-Trinitrotoluene	ND		0.500	ug/L						
Tetryl	ND		0.500	ug/L						
2,6-DNT	ND		0.500	ug/L						
2,4-Dinitrotoluene	ND		0.500	ug/L						
2-Nitrotoluene	ND		0.500	ug/L						
4-Nitrotoluene	ND		0.500	ug/L						
4-Amino-2,6-dinitrotoluene	ND		0.500	ug/L						
3-Nitrotoluene	ND		0.500	ug/L						
2-Amino-4,6-dinitrotoluene	ND		0.500	ug/L						
<i>Surrogate: 1,2-Dinitrobenzene</i>			<i>9.59</i>	<i>ug/L</i>	<i>10.0</i>		<i>95.9</i>	<i>70-130</i>		

#### LCS (BDL0072-BS1)

Prepared: 12/04/23 07:53- Analyzed: 12/26/23 21:38

HMX	4.63		0.500	ug/L	5.00		92.6	70-130		
RDX	5.12		0.500	ug/L	5.00		102	70-130		
1,3,5-TNB	4.38		0.500	ug/L	5.00		87.7	70-130		
1,3-Dinitrobenzene	4.65		0.500	ug/L	5.00		93.0	70-130		
NB	4.75		0.500	ug/L	5.00		95.1	70-130		
2,4,6-Trinitrotoluene	4.59		0.500	ug/L	5.00		91.9	70-130		
Tetryl	4.34		0.500	ug/L	5.00		86.7	70-130		
2,6-DNT	4.42		0.500	ug/L	5.00		88.4	70-130		
2,4-Dinitrotoluene	4.53		0.500	ug/L	5.00		90.6	70-130		
2-Nitrotoluene	4.68		0.500	ug/L	5.00		93.5	70-130		
4-Nitrotoluene	4.52		0.500	ug/L	5.00		90.4	70-130		
4-Amino-2,6-dinitrotoluene	4.36		0.500	ug/L	5.00		87.3	70-130		
3-Nitrotoluene	4.54		0.500	ug/L	5.00		90.8	70-130		
2-Amino-4,6-dinitrotoluene	4.51		0.500	ug/L	5.00		90.2	70-130		
<i>Surrogate: 1,2-Dinitrobenzene</i>			<i>8.60</i>	<i>ug/L</i>	<i>10.0</i>		<i>86.0</i>	<i>70-130</i>		

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## Quality Control Data (Continued)

### Semivolatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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#### Batch: BDL0072 - Explosives (Continued)

##### LCS (BDL0072-BS2)

Prepared: 12/05/23 13:00- Analyzed: 12/27/23 18:13

HMX	4.58		0.500	ug/L	5.00		91.6	70-130		
RDX	4.59		0.500	ug/L	5.00		91.8	70-130		
1,3,5-TNB	4.47		0.500	ug/L	5.00		89.4	70-130		
1,3-Dinitrobenzene	4.65		0.500	ug/L	5.00		92.9	70-130		
NB	4.76		0.500	ug/L	5.00		95.2	70-130		
2,4,6-Trinitrotoluene	4.50		0.500	ug/L	5.00		90.0	70-130		
Tetryl	4.36		0.500	ug/L	5.00		87.1	70-130		
2,6-DNT	4.40		0.500	ug/L	5.00		88.0	70-130		
2,4-Dinitrotoluene	4.52		0.500	ug/L	5.00		90.3	70-130		
2-Nitrotoluene	5.02		0.500	ug/L	5.00		100	70-130		
4-Nitrotoluene	4.59		0.500	ug/L	5.00		91.9	70-130		
4-Amino-2,6-dinitrotoluene	4.77		0.500	ug/L	5.00		95.4	70-130		
3-Nitrotoluene	4.01		0.500	ug/L	5.00		80.3	70-130		
2-Amino-4,6-dinitrotoluene	4.49		0.500	ug/L	5.00		89.7	70-130		
<i>Surrogate: 1,2-Dinitrobenzene</i>			<i>8.31</i>	<i>ug/L</i>	<i>10.0</i>		<i>83.1</i>	<i>70-130</i>		

##### Matrix Spike (BDL0072-MS1)

Source: MDK0709-10

Prepared: 12/04/23 07:53- Analyzed: 12/26/23 22:15

HMX	4.31		0.500	ug/L	5.00	ND	86.1	70-130		
RDX	4.74		0.500	ug/L	5.00	ND	94.8	70-130		
1,3,5-TNB	4.13		0.500	ug/L	5.00	ND	82.6	70-130		
1,3-Dinitrobenzene	4.32		0.500	ug/L	5.00	ND	86.4	70-130		
NB	4.41		0.500	ug/L	5.00	ND	88.1	70-130		
2,4,6-Trinitrotoluene	4.27		0.500	ug/L	5.00	ND	85.5	70-130		
Tetryl	4.21		0.500	ug/L	5.00	ND	84.2	70-130		
2,6-DNT	4.56		0.500	ug/L	5.00	ND	91.2	70-130		
2,4-Dinitrotoluene	4.24		0.500	ug/L	5.00	ND	84.8	70-130		
2-Nitrotoluene	4.75		0.500	ug/L	5.00	ND	94.9	70-130		
4-Nitrotoluene	4.61		0.500	ug/L	5.00	ND	92.2	70-130		
4-Amino-2,6-dinitrotoluene	4.36		0.500	ug/L	5.00	ND	87.2	70-130		
3-Nitrotoluene	4.67		0.500	ug/L	5.00	ND	93.3	70-130		
2-Amino-4,6-dinitrotoluene	4.50		0.500	ug/L	5.00	ND	90.1	70-130		
<i>Surrogate: 1,2-Dinitrobenzene</i>			<i>8.56</i>	<i>ug/L</i>	<i>10.0</i>		<i>85.6</i>	<i>70-130</i>		

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## Quality Control Data (Continued)

### Semivolatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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### Batch: BDL0072 - Explosives (Continued)

#### Matrix Spike (BDL0072-MS2)

Source: MDK0735-04

Prepared: 12/04/23 07:53- Analyzed: 12/27/23 05:07

HMX	4.62		0.500	ug/L	5.00	ND	92.3	70-130		
RDX	4.92		0.500	ug/L	5.00	ND	98.5	70-130		
1,3,5-TNB	4.46		0.500	ug/L	5.00	ND	89.3	70-130		
1,3-Dinitrobenzene	4.69		0.500	ug/L	5.00	ND	93.8	70-130		
NB	4.79		0.500	ug/L	5.00	ND	95.8	70-130		
2,4,6-Trinitrotoluene	4.57		0.500	ug/L	5.00	ND	91.4	70-130		
Tetryl	4.23		0.500	ug/L	5.00	ND	84.7	70-130		
2,6-DNT	4.42		0.500	ug/L	5.00	ND	88.4	70-130		
2,4-Dinitrotoluene	4.52		0.500	ug/L	5.00	ND	90.5	70-130		
2-Nitrotoluene	4.71		0.500	ug/L	5.00	ND	94.2	70-130		
4-Nitrotoluene	4.53		0.500	ug/L	5.00	ND	90.7	70-130		
4-Amino-2,6-dinitrotoluene	4.44		0.500	ug/L	5.00	ND	88.9	70-130		
3-Nitrotoluene	4.39		0.500	ug/L	5.00	ND	87.7	70-130		
2-Amino-4,6-dinitrotoluene	4.56		0.500	ug/L	5.00	ND	91.1	70-130		
<i>Surrogate: 1,2-Dinitrobenzene</i>			<i>8.73</i>	<i>ug/L</i>	<i>10.0</i>		<i>87.3</i>	<i>70-130</i>		

#### Matrix Spike Dup (BDL0072-MSD1)

Source: MDK0709-10

Prepared: 12/04/23 07:53- Analyzed: 12/26/23 22:53

HMX	4.21		0.500	ug/L	5.00	ND	84.2	70-130	2.19	25
RDX	4.67		0.500	ug/L	5.00	ND	93.4	70-130	1.54	25
1,3,5-TNB	4.05		0.500	ug/L	5.00	ND	81.0	70-130	1.95	25
1,3-Dinitrobenzene	4.28		0.500	ug/L	5.00	ND	85.5	70-130	1.06	25
NB	4.33		0.500	ug/L	5.00	ND	86.5	70-130	1.83	25
2,4,6-Trinitrotoluene	4.20		0.500	ug/L	5.00	ND	84.1	70-130	1.63	25
Tetryl	4.20		0.500	ug/L	5.00	ND	84.1	70-130	0.140	25
2,6-DNT	4.50		0.500	ug/L	5.00	ND	90.0	70-130	1.36	25
2,4-Dinitrotoluene	4.17		0.500	ug/L	5.00	ND	83.5	70-130	1.50	25
2-Nitrotoluene	4.62		0.500	ug/L	5.00	ND	92.4	70-130	2.69	25
4-Nitrotoluene	4.56		0.500	ug/L	5.00	ND	91.1	70-130	1.15	25
4-Amino-2,6-dinitrotoluene	4.25		0.500	ug/L	5.00	ND	85.0	70-130	2.64	25
3-Nitrotoluene	4.59		0.500	ug/L	5.00	ND	91.7	70-130	1.77	25
2-Amino-4,6-dinitrotoluene	4.44		0.500	ug/L	5.00	ND	88.8	70-130	1.42	25
<i>Surrogate: 1,2-Dinitrobenzene</i>			<i>8.42</i>	<i>ug/L</i>	<i>10.0</i>		<i>84.2</i>	<i>70-130</i>		

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## Quality Control Data (Continued)

### Semivolatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0072 - Explosives (Continued)</b>										
<b>Matrix Spike Dup (BDL0072-MSD2)</b>			<b>Source: MDK0735-04</b>			Prepared: 12/04/23 07:53- Analyzed: 12/27/23 05:45				
HMX	4.53		0.500	ug/L	5.00	ND	90.5	70-130	1.95	25
RDX	4.90		0.500	ug/L	5.00	ND	98.0	70-130	0.477	25
1,3,5-TNB	4.40		0.500	ug/L	5.00	ND	88.0	70-130	1.45	25
1,3-Dinitrobenzene	4.56		0.500	ug/L	5.00	ND	91.2	70-130	2.84	25
NB	4.67		0.500	ug/L	5.00	ND	93.3	70-130	2.59	25
2,4,6-Trinitrotoluene	4.53		0.500	ug/L	5.00	ND	90.6	70-130	0.928	25
Tetryl	4.23		0.500	ug/L	5.00	ND	84.6	70-130	0.0423	25
2,6-DNT	4.18		0.500	ug/L	5.00	ND	83.6	70-130	5.57	25
2,4-Dinitrotoluene	4.44		0.500	ug/L	5.00	ND	88.8	70-130	1.85	25
2-Nitrotoluene	4.63		0.500	ug/L	5.00	ND	92.7	70-130	1.60	25
4-Nitrotoluene	4.38		0.500	ug/L	5.00	ND	87.5	70-130	3.55	25
4-Amino-2,6-dinitrotoluene	4.31		0.500	ug/L	5.00	ND	86.3	70-130	2.97	25
3-Nitrotoluene	4.16		0.500	ug/L	5.00	ND	83.1	70-130	5.37	25
2-Amino-4,6-dinitrotoluene	4.30		0.500	ug/L	5.00	ND	86.1	70-130	5.73	25
<i>Surrogate: 1,2-Dinitrobenzene</i>			<i>8.18</i>	<i>ug/L</i>	<i>10.0</i>		<i>81.8</i>	<i>70-130</i>		

## Quality Control Data (Continued)

### Volatiles

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0196 - VOC</b>										
<b>Blank (BDL0196-BLK1)</b>						Prepared & Analyzed: 12/06/23 09:04				
Dichlorodifluoromethane	ND		0.500	ug/L						
Ethylbenzene	ND		0.500	ug/L						
Hexachlorobutadiene	ND		0.500	ug/L						
m/p Xylenes (MCL for total)	ND		0.500	ug/L						
cis-1,2-Dichloroethylene	ND		0.500	ug/L						
Methyl ethyl ketone (MEK)	ND		2.50	ug/L						
Methyl isobutyl ketone (MIBK)	ND		2.50	ug/L						
Isopropylbenzene	ND		0.500	ug/L						
Dibromomethane	ND		0.500	ug/L						
cis-1,3-Dichloropropene	ND		0.500	ug/L						
Chloromethane	ND		0.500	ug/L						
Chloroform	ND		0.500	ug/L						
Chloroethane	ND		0.500	ug/L						
Methylene Chloride (Dichloromethane)	ND		2.50	ug/L						
Dibromochloromethane	ND		0.500	ug/L						
tert-Butylbenzene	ND		0.500	ug/L						
Vinyl Chloride	ND		0.500	ug/L						
Trichlorofluoromethane	ND		0.500	ug/L						
Trichloroethene	ND		0.500	ug/L						
trans-1,3-Dichloropropene	ND		0.500	ug/L						

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## Quality Control Data (Continued)

### Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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### Batch: BDL0196 - VOC (Continued)

#### Blank (BDL0196-BLK1)

Prepared & Analyzed: 12/06/23 09:04

trans-1,2 Dichloroethylene	ND		0.500	ug/L						
p-Chlorotoluene	ND		0.500	ug/L						
Tetrachloroethylene	ND		0.500	ug/L						
Chlorobenzene (Monochlorobenzene)	ND		0.500	ug/L						
methyl-t-butyl ether (MTBE)	ND		0.500	ug/L						
Styrene	ND		0.500	ug/L						
sec-Butylbenzene	ND		0.500	ug/L						
p-isopropyltoluene	ND		0.500	ug/L						
o-Xylene (MCL for total)	ND		0.500	ug/L						
n-Propylbenzene	ND		0.500	ug/L						
n-Butylbenzene	ND		0.500	ug/L						
Naphthalene	ND		0.500	ug/L						
Toluene	ND		0.500	ug/L						
1,1-Dichloropropene	ND		0.500	ug/L						
Carbon Tetrachloride	ND		0.500	ug/L						
1,2-Dichlorobenzene (ortho-Dichlorobenzene)	ND		0.500	ug/L						
Acrylonitrile	ND		0.500	ug/L						
DBCP (screening)	ND		0.500	ug/L						
1,2,4-Trimethylbenzene	ND		0.500	ug/L						
1,2,4-Trichlorobenzene	ND		0.500	ug/L						
1,2-Dichloroethane	ND		0.500	ug/L						
1,2,3-Trichlorobenzene	ND		0.500	ug/L						
1,1-Dichloroethylene	ND		0.500	ug/L						
1,1-Dichloroethane	ND		0.500	ug/L						
1,1,2-Trichloroethane	ND		0.500	ug/L						
1,1,2,2-Tetrachloroethane	ND		0.500	ug/L						
1,1,1-Trichloroethane	ND		0.500	ug/L						
1,1,1,2-Tetrachloroethane	ND		0.500	ug/L						
1,2,3-Trichloropropane	ND		0.500	ug/L						
Benzene	ND		0.500	ug/L						
Carbon disulfide	ND		0.500	ug/L						
Bromomethane	ND		0.500	ug/L						
Bromoform	ND		0.500	ug/L						
Bromodichloromethane	ND		0.500	ug/L						
EDB (screening)	ND		0.500	ug/L						
Bromobenzene	ND		0.500	ug/L						
1,2-Dichloropropane	ND		0.500	ug/L						
Acetone	ND		2.50	ug/L						
2-hexanone	ND		2.50	ug/L						
o-Chlorotoluene	ND		0.500	ug/L						
2,2-Dichloropropane	ND		0.500	ug/L						
1,4-Dichlorobenzene (para-Dichlorobenzene)	ND		0.500	ug/L						
1,3-Dichloropropane	ND		0.500	ug/L						
m-Dichlorobenzene	ND		0.500	ug/L						
1,3,5-Trimethylbenzene	ND		0.500	ug/L						
Bromochloromethane	ND		0.500	ug/L						

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## Quality Control Data (Continued)

### Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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### Batch: BDL0196 - VOC (Continued)

#### Blank (BDL0196-BLK1)

Prepared & Analyzed: 12/06/23 09:04

Surrogate: Toluene-d8			20.7	ug/L	20.0		103	70-130		
Surrogate: 4-Bromofluorobenzene			19.5	ug/L	20.0		97.3	70-130		
Surrogate: 1,2-Dichlorobenzene-d4			20.7	ug/L	20.0		103	70-130		

#### LCS (BDL0196-BS1)

Prepared & Analyzed: 12/06/23 09:33

1,2,4-Trichlorobenzene	9.49		0.500	ug/L	10.0		94.9	80-120		
1,1,1,2-Tetrachloroethane	10.4		0.500	ug/L	10.0		104	80-120		
1,1,2-Trichloroethane	10.4		0.500	ug/L	10.0		104	80-120		
1,1,1-Trichloroethane	11.3		0.500	ug/L	10.0		113	80-120		
1,1,2,2-Tetrachloroethane	10.3		0.500	ug/L	10.0		103	77-123		
p-isopropyltoluene	10.7		0.500	ug/L	10.0		107	80-120		
cis-1,2-Dichloroethylene	11.2		0.500	ug/L	10.0		112	80-120		
cis-1,3-Dichloropropene	10.6		0.500	ug/L	10.0		106	79-123		
Dibromochloromethane	10.3		0.500	ug/L	10.0		103	80-121		
Dibromomethane	11.3		0.500	ug/L	10.0		113	80-120		
Dichlorodifluoromethane	9.66		0.500	ug/L	10.0		96.6	57-130		
Ethylbenzene	10.4		0.500	ug/L	10.0		104	80-120		
Hexachlorobutadiene	10.3		0.500	ug/L	10.0		103	80-120		
Isopropylbenzene	10.7		0.500	ug/L	10.0		107	80-120		
m/p Xylenes (MCL for total)	21.2		0.500	ug/L	20.0		106	80-120		
Methyl ethyl ketone (MEK)	11.7		2.50	ug/L	10.0		117	55-154		
Methyl isobutyl ketone (MIBK)	11.2		2.50	ug/L	10.0		112	70-136		
methyl-t-butyl ether (MTBE)	10.8		0.500	ug/L	10.0		108	71-130		
Chloroform	11.2		0.500	ug/L	10.0		112	80-120		
n-Propylbenzene	10.7		0.500	ug/L	10.0		107	80-120		
n-Butylbenzene	10.6		0.500	ug/L	10.0		106	74-122		
sec-Butylbenzene	10.8		0.500	ug/L	10.0		108	80-120		
Styrene	9.77		0.500	ug/L	10.0		97.7	80-120		
tert-Butylbenzene	10.6		0.500	ug/L	10.0		106	80-120		
Tetrachloroethylene	12.6	L5	0.500	ug/L	10.0		126	80-120		
Toluene	11.2		0.500	ug/L	10.0		112	80-120		
trans-1,2 Dichloroethylene	11.2		0.500	ug/L	10.0		112	80-120		
trans-1,3-Dichloropropene	9.77		0.500	ug/L	10.0		97.7	69-130		
Trichloroethene	11.4		0.500	ug/L	10.0		114	80-120		
Trichlorofluoromethane	11.9		0.500	ug/L	10.0		119	61-140		
Vinyl Chloride	11.5		0.500	ug/L	10.0		115	75-120		
1,2,3-Trichlorobenzene	9.82		0.500	ug/L	10.0		98.2	78-120		
1,1-Dichloroethane	11.2		0.500	ug/L	10.0		112	80-120		
Naphthalene	8.87		0.500	ug/L	10.0		88.7	66-133		
EDB (screening)	10.4		0.500	ug/L	10.0		104	70-130		
1,1-Dichloroethylene	11.2		0.500	ug/L	10.0		112	70-129		
1,4-Dichlorobenzene (para-Dichlorobenzene)	9.98		0.500	ug/L	10.0		99.8	80-120		
1,3-Dichloropropane	10.3		0.500	ug/L	10.0		103	80-120		
m-Dichlorobenzene	10.1		0.500	ug/L	10.0		101	80-120		
1,3,5-Trimethylbenzene	10.8		0.500	ug/L	10.0		108	80-121		
2,2-Dichloropropane	11.1		0.500	ug/L	10.0		111	80-120		

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## Quality Control Data (Continued)

### Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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### Batch: BDL0196 - VOC (Continued)

#### LCS (BDL0196-BS1)

Prepared & Analyzed: 12/06/23 09:33

1,2-Dichlorobenzene (ortho-Dichlorobenzene)	9.91		0.500	ug/L	10.0		99.1	80-120		
1,2-Dichloropropane	11.0		0.500	ug/L	10.0		110	80-120		
DBCP (screening)	9.91		0.500	ug/L	10.0		99.1	71-128		
1,2,4-Trimethylbenzene	10.8		0.500	ug/L	10.0		108	80-120		
1,2,3-Trichloropropane	10.4		0.500	ug/L	10.0		104	80-120		
Chloroethane	11.9		0.500	ug/L	10.0		119	78-120		
o-Xylene (MCL for total)	10.5		0.500	ug/L	10.0		105	80-120		
1,1-Dichloropropene	11.4		0.500	ug/L	10.0		114	80-120		
1,2-Dichloroethane	11.3		0.500	ug/L	10.0		113	80-120		
Carbon disulfide	11.7		0.500	ug/L	10.0		117	80-120		
Chlorobenzene (Monochlorobenzene)	10.4		0.500	ug/L	10.0		104	80-120		
Carbon Tetrachloride	11.7		0.500	ug/L	10.0		117	80-120		
Bromoform	10.2		0.500	ug/L	10.0		102	68-133		
Bromodichloromethane	11.3		0.500	ug/L	10.0		113	80-120		
Bromochloromethane	11.6		0.500	ug/L	10.0		116	80-120		
Bromobenzene	10.2		0.500	ug/L	10.0		102	80-120		
Benzene	11.2		0.500	ug/L	10.0		112	80-120		
Acrylonitrile	12.2		0.500	ug/L	10.0		122	73-131		
Acetone	11.7		2.50	ug/L	10.0		117	70-130		
p-Chlorotoluene	10.5		0.500	ug/L	10.0		105	80-124		
2-hexanone	9.85		2.50	ug/L	10.0		98.5	65-140		
o-Chlorotoluene	10.6		0.500	ug/L	10.0		106	80-120		
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Surrogate: Toluene-d8			21.1	ug/L	20.0		105	70-130		
Surrogate: 4-Bromofluorobenzene			20.4	ug/L	20.0		102	70-130		
Surrogate: 1,2-Dichlorobenzene-d4			19.7	ug/L	20.0		98.6	70-130		

#### Matrix Spike (BDL0196-MS1)

Source: MDL0102-01

Prepared & Analyzed: 12/06/23 13:57

cis-1,2-Dichloroethylene	11.7		0.500	ug/L	10.0	ND	117	70-130		
Methyl isobutyl ketone (MIBK)	11.2		2.50	ug/L	10.0	ND	112	53-167		
Methyl ethyl ketone (MEK)	11.2		2.50	ug/L	10.0	ND	112	47-165		
m/p Xylenes (MCL for total)	21.6		0.500	ug/L	20.0	ND	108	57-130		
Isopropylbenzene	10.7		0.500	ug/L	10.0	ND	107	70-130		
Hexachlorobutadiene	10.0		0.500	ug/L	10.0	ND	100	70-130		
Ethylbenzene	10.6		0.500	ug/L	10.0	ND	106	70-130		
Dichlorodifluoromethane	10.5		0.500	ug/L	10.0	ND	105	57-136		
Dibromomethane	11.9		0.500	ug/L	10.0	ND	119	70-130		
Chloroethane	12.5		0.500	ug/L	10.0	ND	125	68-138		
cis-1,3-Dichloropropene	10.9		0.500	ug/L	10.0	ND	109	74-124		
methyl-t-butyl ether (MTBE)	11.1		0.500	ug/L	10.0	ND	111	57-138		
Carbon Tetrachloride	12.6		0.500	ug/L	10.0	ND	126	70-130		
Vinyl Chloride	12.3		0.500	ug/L	10.0	ND	123	70-130		
Dibromochloromethane	10.2		0.500	ug/L	10.0	ND	102	70-130		
tert-Butylbenzene	10.5		0.500	ug/L	10.0	ND	105	70-130		
Chlorobenzene (Monochlorobenzene)	10.5		0.500	ug/L	10.0	ND	105	70-130		
Carbon disulfide	12.6		0.500	ug/L	10.0	ND	126	70-130		
Trichlorofluoromethane	12.8		0.500	ug/L	10.0	ND	128	50-154		

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## Quality Control Data (Continued)

### Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0196 - VOC (Continued)</b>										
<b>Matrix Spike (BDL0196-MS1)</b>			<b>Source: MDL0102-01</b>			Prepared & Analyzed: 12/06/23 13:57				
trans-1,3-Dichloropropene	9.78		0.500	ug/L	10.0	ND	97.8	61-131		
trans-1,2 Dichloroethylene	11.8		0.500	ug/L	10.0	ND	118	70-130		
Trichloroethene	12.0		0.500	ug/L	10.0	ND	120	70-130		
Tetrachloroethylene	10.5		0.500	ug/L	10.0	ND	105	70-130		
Naphthalene	8.35		0.500	ug/L	10.0	ND	83.5	56-147		
Styrene	10.0		0.500	ug/L	10.0	ND	100	30-130		
sec-Butylbenzene	10.9		0.500	ug/L	10.0	ND	109	70-130		
p-isopropyltoluene	10.7		0.500	ug/L	10.0	ND	107	70-130		
o-Xylene (MCL for total)	10.5		0.500	ug/L	10.0	ND	105	62-127		
n-Propylbenzene	10.8		0.500	ug/L	10.0	ND	108	70-130		
n-Butylbenzene	10.6		0.500	ug/L	10.0	ND	106	67-130		
Toluene	11.8		0.500	ug/L	10.0	ND	118	70-130		
1,1-Dichloropropene	12.1		0.500	ug/L	10.0	ND	121	70-130		
1,2-Dichlorobenzene (ortho-Dichlorobenzene)	9.99		0.500	ug/L	10.0	ND	99.9	70-130		
EDB (screening)	10.7		0.500	ug/L	10.0	ND	107	70-130		
DBCP (screening)	9.56		0.500	ug/L	10.0	ND	95.6	55-146		
1,2,4-Trimethylbenzene	10.9		0.500	ug/L	10.0	ND	109	40-140		
1,1,1,2-Tetrachloroethane	10.5		0.500	ug/L	10.0	ND	105	70-130		
1,2-Dichloroethane	11.8		0.500	ug/L	10.0	ND	118	70-130		
Bromoform	9.18		0.500	ug/L	10.0	ND	91.8	59-140		
1,2,4-Trichlorobenzene	9.28		0.500	ug/L	10.0	ND	92.8	70-130		
1,1-Dichloroethylene	12.0		0.500	ug/L	10.0	ND	120	70-130		
1,1-Dichloroethane	11.7		0.500	ug/L	10.0	ND	117	70-130		
1,1,2-Trichloroethane	10.5		0.500	ug/L	10.0	ND	105	70-130		
1,1,2,2-Tetrachloroethane	10.5		0.500	ug/L	10.0	ND	105	67-136		
1,1,1-Trichloroethane	12.0		0.500	ug/L	10.0	ND	120	70-130		
Chloroform	11.9		0.500	ug/L	10.0	ND	119	70-130		
1,2,3-Trichloropropane	10.5		0.500	ug/L	10.0	ND	105	69-137		
Acrylonitrile	11.0		0.500	ug/L	10.0	ND	110	65-137		
Bromodichloromethane	11.9		0.500	ug/L	10.0	ND	119	70-130		
1,2,3-Trichlorobenzene	9.37		0.500	ug/L	10.0	ND	93.7	67-134		
1,2-Dichloropropane	11.6		0.500	ug/L	10.0	ND	116	70-130		
Bromochloromethane	12.2		0.500	ug/L	10.0	ND	122	70-130		
Benzene	11.8		0.500	ug/L	10.0	ND	118	70-130		
Acetone	11.6		2.50	ug/L	10.0	ND	116	70-130		
p-Chlorotoluene	10.7		0.500	ug/L	10.0	ND	107	70-130		
1,3-Dichloropropane	10.5		0.500	ug/L	10.0	ND	105	70-130		
1,3,5-Trimethylbenzene	10.9		0.500	ug/L	10.0	ND	109	40-140		
Bromobenzene	10.1		0.500	ug/L	10.0	ND	101	70-130		
m-Dichlorobenzene	10.2		0.500	ug/L	10.0	ND	102	70-130		
1,4-Dichlorobenzene (para-Dichlorobenzene)	10.1		0.500	ug/L	10.0	ND	101	70-130		
2,2-Dichloropropane	11.9		0.500	ug/L	10.0	ND	119	70-130		
o-Chlorotoluene	10.6		0.500	ug/L	10.0	ND	106	70-130		
2-hexanone	10.0		2.50	ug/L	10.0	ND	100	43-175		
<i>Surrogate: Toluene-d8</i>			21.3	ug/L	20.0		107	70-130		
<i>Surrogate: 4-Bromofluorobenzene</i>			20.4	ug/L	20.0		102	70-130		

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## Quality Control Data (Continued)

### Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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### Batch: BDL0196 - VOC (Continued)

#### Matrix Spike (BDL0196-MS1)

Source: MDL0102-01

Prepared & Analyzed: 12/06/23 13:57

Surrogate: 1,2-Dichlorobenzene-d4 19.5 ug/L 20.0 97.7 70-130

#### Matrix Spike Dup (BDL0196-MSD1)

Source: MDL0102-01

Prepared & Analyzed: 12/06/23 14:26

Hexachlorobutadiene	8.64		0.500	ug/L	10.0	ND	86.4	70-130	14.6	20
Chlorobenzene (Monochlorobenzene)	8.78		0.500	ug/L	10.0	ND	87.8	70-130	18.2	20
Methyl isobutyl ketone (MIBK)	9.70		2.500	ug/L	10.0	ND	97.0	53-167	13.9	20
Methyl ethyl ketone (MEK)	9.89		2.500	ug/L	10.0	ND	98.9	47-165	12.7	20
m/p Xylenes (MCL for total)	18.0		0.500	ug/L	20.0	ND	89.9	57-130	18.3	20
Isopropylbenzene	9.03		0.500	ug/L	10.0	ND	90.3	70-130	17.3	20
methyl-t-butyl ether (MTBE)	9.65		0.500	ug/L	10.0	ND	96.5	57-138	14.2	20
Ethylbenzene	8.86		0.500	ug/L	10.0	ND	88.6	70-130	17.4	20
Dichlorodifluoromethane	8.77		0.500	ug/L	10.0	ND	87.7	57-136	17.5	20
Dibromomethane	10.2		0.500	ug/L	10.0	ND	102	70-130	15.6	20
Dibromochloromethane	8.55		0.500	ug/L	10.0	ND	85.5	70-130	17.5	20
cis-1,3-Dichloropropene	9.33		0.500	ug/L	10.0	ND	93.3	74-124	15.3	20
cis-1,2-Dichloroethylene	9.92		0.500	ug/L	10.0	ND	99.2	70-130	16.2	20
Chloroethane	10.3		0.500	ug/L	10.0	ND	103	68-138	19.4	20
Chloroform	9.98		0.500	ug/L	10.0	ND	99.8	70-130	17.9	20
Tetrachloroethylene	8.74		0.500	ug/L	10.0	ND	87.4	70-130	18.2	20
1,2-Dichloropropane	9.79		0.500	ug/L	10.0	ND	97.9	70-130	16.5	20
Vinyl Chloride	10.3		0.500	ug/L	10.0	ND	103	70-130	17.3	20
Carbon Tetrachloride	10.3		0.500	ug/L	10.0	ND	103	70-130	19.8	20
Trichloroethene	10.2		0.500	ug/L	10.0	ND	102	70-130	16.2	20
trans-1,3-Dichloropropene	8.35		0.500	ug/L	10.0	ND	83.5	61-131	15.8	20
trans-1,2 Dichloroethylene	9.86		0.500	ug/L	10.0	ND	98.6	70-130	17.9	20
Trichlorofluoromethane	10.6		0.500	ug/L	10.0	ND	106	50-154	18.7	20
Toluene	9.89		0.500	ug/L	10.0	ND	98.9	70-130	17.9	20
Naphthalene	7.43		0.500	ug/L	10.0	ND	74.3	56-147	11.7	20
tert-Butylbenzene	8.98		0.500	ug/L	10.0	ND	89.8	70-130	15.7	20
Styrene	8.35		0.500	ug/L	10.0	ND	83.5	30-130	18.3	20
sec-Butylbenzene	9.13		0.500	ug/L	10.0	ND	91.3	70-130	17.2	20
p-isopropyltoluene	9.02		0.500	ug/L	10.0	ND	90.2	70-130	16.8	20
o-Xylene (MCL for total)	8.87		0.500	ug/L	10.0	ND	88.7	62-127	16.7	20
n-Propylbenzene	9.07		0.500	ug/L	10.0	ND	90.7	70-130	17.4	20
n-Butylbenzene	8.86		0.500	ug/L	10.0	ND	88.6	67-130	17.8	20
1,1-Dichloropropene	10.1		0.500	ug/L	10.0	ND	101	70-130	18.5	20
1,2-Dichlorobenzene (ortho-Dichlorobenzene)	8.46		0.500	ug/L	10.0	ND	84.6	70-130	16.6	20
EDB (screening)	8.89		0.500	ug/L	10.0	ND	88.9	70-130	18.1	20
DBCP (screening)	8.30		0.500	ug/L	10.0	ND	83.0	55-146	14.1	20
1,2,4-Trimethylbenzene	9.18		0.500	ug/L	10.0	ND	91.8	40-140	16.9	20
1,2,4-Trichlorobenzene	7.96		0.500	ug/L	10.0	ND	79.6	70-130	15.3	20
m-Dichlorobenzene	8.67		0.500	ug/L	10.0	ND	86.7	70-130	16.1	20
1,2,3-Trichlorobenzene	8.24		0.500	ug/L	10.0	ND	82.4	67-134	12.8	20
1,3,5-Trimethylbenzene	9.11		0.500	ug/L	10.0	ND	91.1	40-140	17.7	20
1,1-Dichloroethylene	9.90		0.500	ug/L	10.0	ND	99.0	70-130	19.0	20
1,1-Dichloroethane	9.90		0.500	ug/L	10.0	ND	99.0	70-130	16.9	20

# Anatek Labs, Inc.

1282 Alturas Drive - Moscow, ID 83843 - (208) 883-2839 - email moscow@anateklabs.com  
 504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

## Quality Control Data (Continued)

### Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BDL0196 - VOC (Continued)</b>										
<b>Matrix Spike Dup (BDL0196-MSD1)</b>			<b>Source: MDL0102-01</b>			Prepared & Analyzed: 12/06/23 14:26				
1,1,2-Trichloroethane	8.98		0.500	ug/L	10.0	ND	89.8	70-130	15.9	20
1,1,2,2-Tetrachloroethane	9.14		0.500	ug/L	10.0	ND	91.4	67-136	13.9	20
1,1,1-Trichloroethane	10.1		0.500	ug/L	10.0	ND	101	70-130	17.7	20
1,1,1,2-Tetrachloroethane	8.95		0.500	ug/L	10.0	ND	89.5	70-130	15.6	20
1,2,3-Trichloropropane	8.98		0.500	ug/L	10.0	ND	89.8	69-137	15.6	20
Bromoform	7.81		0.500	ug/L	10.0	ND	78.1	59-140	16.1	20
Bromodichloromethane	10.0		0.500	ug/L	10.0	ND	100	70-130	16.7	20
Bromochloromethane	10.3		0.500	ug/L	10.0	ND	103	70-130	16.9	20
Bromobenzene	8.75		0.500	ug/L	10.0	ND	87.5	70-130	14.0	20
Benzene	9.83		0.500	ug/L	10.0	ND	98.3	70-130	18.1	20
Acrylonitrile	10.1		0.500	ug/L	10.0	ND	101	65-137	8.27	20
p-Chlorotoluene	8.94		0.500	ug/L	10.0	ND	89.4	70-130	17.5	20
1,2-Dichloroethane	10.0		0.500	ug/L	10.0	ND	100	70-130	16.3	20
2-hexanone	8.84		2.50	ug/L	10.0	ND	88.4	43-175	12.5	20
o-Chlorotoluene	8.92		0.500	ug/L	10.0	ND	89.2	70-130	16.8	20
2,2-Dichloropropane	10.0		0.500	ug/L	10.0	ND	100	70-130	17.3	20
1,4-Dichlorobenzene (para-Dichlorobenzene)	8.74		0.500	ug/L	10.0	ND	87.4	70-130	14.7	20
1,3-Dichloropropane	8.89		0.500	ug/L	10.0	ND	88.9	70-130	16.7	20
Carbon disulfide	10.4		0.500	ug/L	10.0	ND	104	70-130	19.3	20
Acetone	10.0		2.50	ug/L	10.0	ND	100	70-130	14.0	20
<i>Surrogate: Toluene-d8</i>			<i>21.5</i>	<i>ug/L</i>	<i>20.0</i>		<i>107</i>	<i>70-130</i>		
<i>Surrogate: 4-Bromofluorobenzene</i>			<i>20.5</i>	<i>ug/L</i>	<i>20.0</i>		<i>103</i>	<i>70-130</i>		
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			<i>19.6</i>	<i>ug/L</i>	<i>20.0</i>		<i>97.8</i>	<i>70-130</i>		



# Chain of Custody Record

1282 Alturas  
504 E Sprague

MDL0103



39  
999

Due: 12/19/23

www.anateklabs.com/pricing-lists

Normal  Phone  
 Next Day\*  Email  
 2nd Day\* \*All rush order requests must  
 Other\* have prior approval

Company Name: PBS Engineering and Environmental	Project Manager: Scott Braunsten
Address: 4412 S Corbett Ave	Project Name & #: Camp Bonneville, 76151.012
City: Portland State: OR Zip: 97239	Purchase Order #:
Phone: 503-248-1939	Sampler Name & Phone: D. Rakki + R. Martin 646-734-9677
Email Address(es): scott.braunsten@pbsusa.com, samantha.eckes@pbsusa.com	

Lab ID	Sample Identification	Sampling Date/Time	Matrix	List Analyses Requested					Preservative:	# of Containers	Sample Volume	VOCs by 8260B	Explosives by 8330	Perchlorate by 6850
	04Q23L4Mw088W	12-1-23 / 1200	H2O						6		X	X	X	
	04Q23L4Mw08AW	↓ / 1245	↓						6		X	X	X	
	120123TB	↓ -	↓						1		X			

**Note Special Instructions/Comments**

Please send login confirmation

Please provide EQUIS EDD + WA EIM

	Printed Name	Signature	Company	Date	Time
Relinquished by	David Rakki	<i>David Rakki</i>	PBS	12-4-23	1245
Received by	TB			12/5/23	11:56
Relinquished by					
Received by					
Relinquished by					
Received by					

**Inspection Checklist**

Received Intact?	Y	N
Labels & Chains Agree?	Y	N
Containers Sealed?	Y	N
No VOC Head Space?	Y	N
Cooler?	Y	N
Ice/Ice Packs Present?	Y	N

Temperature (°C): \_\_\_\_\_

Number of Containers: \_\_\_\_\_

Shipped Via: \_\_\_\_\_

Preservative: \_\_\_\_\_

Date & Time: \_\_\_\_\_

Inspected By: \_\_\_\_\_

Samples submitted to Anatek Labs may be subcontracted to other accredited labs if necessary. This message serves as notice of this possibility. Subcontracted analyses will be clearly noted on the analytical report.



Client Name: PBS

TAT: Normal RUSH: \_\_\_\_\_ days

Samples Received From: FedEx UPS USPS Client Courier Other: \_\_\_\_\_

Custody Seal on Cooler/Box: Yes No Custody Seals Intact: Yes No N/A

Number of Coolers/Boxes: \_\_\_\_\_ Type of Ice: Wet Ice Ice Packs Dry Ice None

Packing Material: Bubble Wrap Bags Foam/Peanuts Paper None Other: \_\_\_\_\_

Cooler Temp As Read (°C): 4.1 Cooler Temp Corrected (°C): — Thermometer Used: IR-5

Comments:

Samples Received Intact? Yes No N/A  
 Chain of Custody Present/Complete? Yes No N/A  
 Labels and Chains Agree? Yes No N/A  
 Samples Received Within Hold Time? Yes No N/A  
 Correct Containers Received? Yes No N/A  
 Anatek Bottles Used? Yes No Unknown  
 Total Number of Sample Bottles Received: 13


Samples Properly Preserved? Yes No N/A  
*If No, record preservation and pH-after details*  
 VOC Vials Free of Headpace (<6mm)? Yes No N/A  
 VOC Trip Blanks Present? Yes No N/A

Initial pH:	pH Paper ID:
<2 or	

Record preservatives (and lot numbers, if known) for containers below:

61L Expl x 4  
644 HCL VOC 8260 X6 + TB  
P250 Perc x 2

Notes, comments, etc. (also use this space if contacting the client - record names and date/time)

Received/Inspected By: TB Date/Time: 12/5/23 11:56

# **Appendix E**

## **Anatek, Level III Data Package**

(Electronic files provided on enclosed CD)



# Anatek Labs, Inc

1282 Alturas Drive  
Moscow, ID 83843

## Calibration Standard Preparation Form

Methods: EPA 331/6850

Initial Calibration and CCV Standard Number: 2302764  
Initial Calibration and CCV Standard Concentration: 100 ppb  
Initial Calibration and CCV Standard Expiration Date: 2/17/24

Laboratory Fortified Synthetic Sample Matrix Spiking Standard Number: 2302764  
Matrix Spiking Standard Concentration: 100 ppb  
Matrix Spiking Standards Expiration Dates: 2/17/24

Initial Calibration Verification (ICV) Standard: 2301022  
Initial Calibration Verification (ICV) Stock Standard Concentration: 16.0 ppb  
Initial Calibration Verification Expiration Date: 3/24

Internal Standard Number: 2302773  
Internal Standard Concentration: 100 ppb  
Internal Standard Expiration Date: 8/24

### Initial Calibration Dilution Template (minimum of 5 calibration points)

Desired Concentration (ppb)	Stock Concentration (ppb)	Standard Added (uL)	IS Added (uL)	H <sub>2</sub> O Added (uL)	Final Volume (mL)
Blank	0	0	25	1000	1.00
LFSSM	100	50	25	950**	1.00
LSSM	0	0	25	1000**	1.00
50	100	500	25	500	1.00
20	100	200	25	800	1.00
10	100	100	25	900	1.00
5	100	50	25	950	1.00
1	100	10	25	990	1.00
0.2	100	2	25	998	1.00
0.05	100	0.5	25	1000	1.00
ICV	16	1000	25	0	1.00

Note: \* LSSM solution (2202828) used not H<sub>2</sub>O. LSSM solution consists of 1000 mg/L of NaCl, Na<sub>2</sub>SO<sub>4</sub>, NaHCO<sub>3</sub>

#### Solution Prepared:

ICAL Standards  
 ICV  
N/A LFSSM  
N/A LSSM

12/18/23  
BDL0320  
+321

Analyst: GMB  
Form CL05.00 – Eff 10 Aug 2015

Date of Preparation: 12/10/23  
Page 1 of 1

Methods: EPA 331.0/6850 –Perchlorate  
 Solvent: Water  
 Instrument: LC-MS-MS  
 Ext. Method: Direct injection

Internal Standard (IS)	Solution #	Concentration (ppb)	Expiration Date
Perchlorate -Cl <sup>18</sup> O <sub>4</sub> <sup>-</sup>	2302773	100	8/30/24
Continuing Cal Verification (CCV)	Solution #	Concentration (ppb)	Expiration Date
Perchlorate	2302764	100	2/17/24
Matrix Spiking Info (MS/MSD)	Solution #	Concentration (ppb)	Expiration Date
Perchlorate	2302764	100	2/17/24
Quality Control Std (QCS)	Solution #	Concentration (ppb)	Expiration Date
Perchlorate ICV	2301022	16	3/2024

Sample #	Sample Added (uL)	ICAL Standard Added (uL)	IS Added (uL)	H <sub>2</sub> O Added (uL)	Final Volume (ml)	Dilution factor
BDL0321-BLK1	0	0	25	1000	1.00	1
BDL0321-BLK2	0	50	25	1000	1.00	1
BDL0321-BS1	0	50	25	950	1.00	1
BDL0321-BS2	0	0	25	950	1.00	1
BDL0320-MRL1	0	0.5	25	999	1.00	1
BDL0320-MRL2	0	0.5	25	999	1.00	1
BDL0320-MS1	1000	50	25	0	1.00	1
BDL0320-MSD1	1000	50	25	0	1.00	1
MDL0099-01	1000	0	25	0	1.00	1
BDL0321-MS1	1000	50	25	0	1.00	1
BDL0321-MSD1	1000	50	25	0	1.00	1
BDL0321-MS2	1000	50	25	0	1.00	1
BDL0321-MSD2	1000	50	25	0	1.00	1
MDK0709-01	1000	0	25	0	1.00	1
MDK0709-02	1000	0	25	0	1.00	1
MDK0709-03	1000	0	25	0	1.00	1
MDK0709-04	1000	0	25	0	1.00	1
MDK0709-05	1000	0	25	0	1.00	1
MDK0709-06	1000	0	25	0	1.00	1
MDK0709-07	1000	0	25	0	1.00	1
MDK0709-08	1000	0	25	0	1.00	1
MDK0709-09	1000	0	25	0	1.00	1
MDK0709-10	1000	0	25	0	1.00	1
MDK0709-11	1000	0	25	0	1.00	1
MDK0709-12	1000	0	25	0	1.00	1
MDK0709-13	1000	0	25	0	1.00	1
MDK0735-01	1000	0	25	0	1.00	1
MDK0735-02	1000	0	25	0	1.00	1
MDK0735-03	1000	0	25	0	1.00	1
MDK0735-04	1000	0	25	0	1.00	1
MDK0735-05	1000	0	25	0	1.00	1
MDK0735-06	1000	0	25	0	1.00	1
MDK0735-07	1000	0	25	0	1.00	1
* MDK0735-08	1000	0	25	0	1.00	1
MDK0735-09	1000	0	25	0	1.00	1

\*dilute  
(20 mL)

MDL0022-01	1000	0	25	0	1.00	1
MDL0022-02	1000	0	25	0	1.00	1
MDL0022-03	1000	0	25	0	1.00	1
MDL0022-04	1000	0	25	0	1.00	1
MDL0022-05	1000	0	25	0	1.00	1
MDL0022-06	1000	0	25	0	1.00	1
MDL0022-07	1000	0	25	0	1.00	1
<del>MDL0022-08</del>	1000	0	25	0	1.00	1
MDL0022-09	1000	0	25	0	1.00	1
MDL0022-10	1000	0	25	0	1.00	1
MDL0102-01	1000	0	25	0	1.00	1
MDK0102-02	1000	0	25	0	1.00	1
MDL0103-01	1000	0	25	0	1.00	1
MDL0103-02	1000	0	25	0	1.00	1

Note: \* LSSM solution (2202828) used not H<sub>2</sub>O. LSSM solution consists of 1000 mg/L of NaCl, Na<sub>2</sub>SO<sub>4</sub>, NaHCO<sub>3</sub>

Pipettes: 10-100 uL: PM-13  
100-1000 uL: PI-11

	Sample Name	Sample Type	Acquisition Date	File Name	Dilution Factor	Analyte Peak Name	Analyte Peak Area (counts)	Analyte Concentration (ng/ml)	IS Peak Area (counts)	Calculated Concentration (ng/ml)	Accuracy (%)
1	50 ppb ICAL	Standard	12/11/2023 9:46:2	121123_perc	1.00	Perc C37	1.13e+006	50.0	1.65e+005	50.0	100.
2	50 ppb ICAL	Standard	12/11/2023 9:46:2	121123_perc	1.00	Perc C35	3.16e+006	50.0	1.65e+005	50.0	100.
3	20 ppb ICAL	Standard	12/11/2023 9:53:4	121123_perc	1.00	Perc C37	2.99e+005	20.0	1.06e+005	19.9	99.3
4	20 ppb ICAL	Standard	12/11/2023 9:53:4	121123_perc	1.00	Perc C35	8.61e+005	20.0	1.06e+005	20.0	100.
5	10 ppb ICAL	Standard	12/11/2023 10:01:	121123_perc	1.00	Perc C37	2.52e+005	10.0	1.74e+005	10.1	101.
6	10 ppb ICAL	Standard	12/11/2023 10:01:	121123_perc	1.00	Perc C35	7.13e+005	10.0	1.74e+005	9.93	99.3
7	5 ppb ICAL	Standard	12/11/2023 10:08:	121123_perc	1.00	Perc C37	1.30e+005	5.00	1.79e+005	4.99	99.8
8	5 ppb ICAL	Standard	12/11/2023 10:08:	121123_perc	1.00	Perc C35	3.72e+005	5.00	1.79e+005	4.99	99.7
9	1 ppb ICAL	Standard	12/11/2023 10:15:	121123_perc	1.00	Perc C37	2.71e+004	1.00	1.77e+005	1.03	103.
10	1 ppb ICAL	Standard	12/11/2023 10:15:	121123_perc	1.00	Perc C35	7.88e+004	1.00	1.77e+005	1.06	106.
11	0.2 ppb ICAL	Standard	12/11/2023 10:22:	121123_perc	1.00	Perc C37	5.66e+003	0.200	1.81e+005	0.187	93.3
12	0.2 ppb ICAL	Standard	12/11/2023 10:22:	121123_perc	1.00	Perc C35	1.47e+004	0.200	1.81e+005	0.186	93.2
13	0.05 ppb ICAL	Standard	12/11/2023 10:30:	121123_perc	1.00	Perc C37	2.09e+003	0.0500	1.80e+005	0.0518	104.
14	0.05 ppb ICAL	Standard	12/11/2023 10:30:	121123_perc	1.00	Perc C35	4.29e+003	0.0500	1.80e+005	0.0508	102.
15	16 ppb ICV	Quality Co	12/11/2023 10:37:	121123_perc	1.00	Perc C37	3.85e+005	16.0	1.68e+005	16.0	100.
16	16 ppb ICV	Quality Co	12/11/2023 10:37:	121123_perc	1.00	Perc C35	1.12e+006	16.0	1.68e+005	16.4	102.
17	BDL0321-BLK1	Unknown	12/11/2023 10:44:	121123_perc	1.00	Perc C37	0.00e+000	N/A	1.75e+005	No Peak	N/A
18	BDL0321-BLK1	Unknown	12/11/2023 10:44:	121123_perc	1.00	Perc C35	0.00e+000	N/A	1.75e+005	No Peak	N/A
19	BDL0321-BS1	Unknown	12/11/2023 10:51:	121123_perc	1.00	Perc C37	1.31e+005	N/A	1.71e+005	5.29	N/A
20	BDL0321-BS1	Unknown	12/11/2023 10:51:	121123_perc	1.00	Perc C35	3.73e+005	N/A	1.71e+005	5.23	N/A
21	BDL0320-MRL1	Unknown	12/11/2023 10:59:	121123_perc	1.00	Perc C37	1.94e+003	N/A	1.74e+005	0.0484	N/A
22	BDL0320-MRL1	Unknown	12/11/2023 10:59:	121123_perc	1.00	Perc C35	4.98e+003	N/A	1.74e+005	0.0619	N/A
23	MDL0099-01	Unknown	12/11/2023 11:06:	121123_perc	1.00	Perc C37	2.80e+003	N/A	1.80e+005	0.0786	N/A
24	MDL0099-01	Unknown	12/11/2023 11:06:	121123_perc	1.00	Perc C35	7.25e+003	N/A	1.80e+005	0.0897	N/A
25	BDL0320-MS1	Unknown	12/11/2023 11:13:	121123_perc	1.00	Perc C37	1.10e+005	N/A	1.44e+005	5.26	N/A
26	BDL0320-MS1	Unknown	12/11/2023 11:13:	121123_perc	1.00	Perc C35	3.14e+005	N/A	1.44e+005	5.22	N/A
27	BDL0320-MSD1	Unknown	12/11/2023 11:21:	121123_perc	1.00	Perc C37	1.14e+005	N/A	1.56e+005	5.02	N/A
28	BDL0320-MSD1	Unknown	12/11/2023 11:21:	121123_perc	1.00	Perc C35	3.42e+005	N/A	1.56e+005	5.27	N/A
29	BDL0321-MS1	Unknown	12/11/2023 11:28:	121123_perc	1.00	Perc C37	1.28e+005	N/A	1.73e+005	5.07	N/A

	Sample Name	Sample Type	Acquisition Date	File Name	Dilution Factor	Analyte Peak Name	Analyte Peak Area (counts)	Analyte Concentration (ng/ml)	IS Peak Area (counts)	Calculated Concentration (ng/ml)	Accuracy (%)
30	BDL0321-MS1	Unknown	12/11/2023 11:28:	121123_perc	1.00	Perc C35	3.75e+005	N/A	1.73e+005	5.20	N/A
31	BDL0321-MSD1	Unknown	12/11/2023 11:35:	121123_perc	1.00	Perc C37	1.29e+005	N/A	1.70e+005	5.22	N/A
32	BDL0321-MSD1	Unknown	12/11/2023 11:35:	121123_perc	1.00	Perc C35	3.79e+005	N/A	1.70e+005	5.35	N/A
33	MDK0709-01	Unknown	12/11/2023 11:42:	121123_perc	1.00	Perc C37	2.73e+003	N/A	1.76e+005	0.0785	N/A
34	MDK0709-01	Unknown	12/11/2023 11:42:	121123_perc	1.00	Perc C35	7.92e+003	N/A	1.76e+005	0.101	N/A
35	MDK0709-02	Unknown	12/11/2023 11:50:	121123_perc	1.00	Perc C37	2.44e+003	N/A	1.66e+005	0.0728	N/A
36	MDK0709-02	Unknown	12/11/2023 11:50:	121123_perc	1.00	Perc C35	6.83e+003	N/A	1.66e+005	0.0921	N/A
37	MDK0709-03	Unknown	12/11/2023 11:57:	121123_perc	1.00	Perc C37	2.95e+003	N/A	1.54e+005	0.104	N/A
38	MDK0709-03	Unknown	12/11/2023 11:57:	121123_perc	1.00	Perc C35	8.49e+003	N/A	1.54e+005	0.125	N/A
39	MDK0709-04	Unknown	12/11/2023 12:04:	121123_perc	1.00	Perc C37	4.00e+003	N/A	1.74e+005	0.130	N/A
40	MDK0709-04	Unknown	12/11/2023 12:04:	121123_perc	1.00	Perc C35	1.17e+004	N/A	1.74e+005	0.155	N/A
41	MDK0709-05	Unknown	12/11/2023 12:12:	121123_perc	1.00	Perc C37	2.37e+003	N/A	1.59e+005	0.0744	N/A
42	MDK0709-05	Unknown	12/11/2023 12:12:	121123_perc	1.00	Perc C35	7.24e+003	N/A	1.59e+005	0.103	N/A
43	MDK0709-06	Unknown	12/11/2023 12:19:	121123_perc	1.00	Perc C37	2.87e+003	N/A	1.65e+005	0.0912	N/A
44	MDK0709-06	Unknown	12/11/2023 12:19:	121123_perc	1.00	Perc C35	9.58e+003	N/A	1.65e+005	0.132	N/A
45	MDK0709-07	Unknown	12/11/2023 12:26:	121123_perc	1.00	Perc C37	1.64e+003	N/A	1.55e+005	0.0446	N/A
46	MDK0709-07	Unknown	12/11/2023 12:26:	121123_perc	1.00	Perc C35	6.33e+003	N/A	1.55e+005	0.0912	N/A
47	MDK0709-08	Unknown	12/11/2023 12:33:	121123_perc	1.00	Perc C37	2.00e+003	N/A	1.24e+005	0.0826	N/A
48	MDK0709-08	Unknown	12/11/2023 12:33:	121123_perc	1.00	Perc C35	5.56e+003	N/A	1.24e+005	0.101	N/A
49	MDK0709-09	Unknown	12/11/2023 12:41:	121123_perc	1.00	Perc C37	2.30e+003	N/A	1.64e+005	0.0683	N/A
50	MDK0709-09	Unknown	12/11/2023 12:41:	121123_perc	1.00	Perc C35	6.37e+003	N/A	1.64e+005	0.0865	N/A
51	CCV 5 ppb	Unknown	12/11/2023 12:48:	121123_perc	1.00	Perc C37	1.23e+005	N/A	1.70e+005	4.99	N/A
52	CCV 5 ppb	Unknown	12/11/2023 12:48:	121123_perc	1.00	Perc C35	3.67e+005	N/A	1.70e+005	5.19	N/A
53	MDK0709-10	Unknown	12/11/2023 12:55:	121123_perc	1.00	Perc C37	2.79e+003	N/A	1.64e+005	0.0889	N/A
54	MDK0709-10	Unknown	12/11/2023 12:55:	121123_perc	1.00	Perc C35	8.45e+003	N/A	1.64e+005	0.117	N/A
55	MDK0709-11	Unknown	12/11/2023 1:02:5	121123_perc	1.00	Perc C37	2.12e+003	N/A	1.20e+005	0.0928	N/A
56	MDK0709-11	Unknown	12/11/2023 1:02:5	121123_perc	1.00	Perc C35	5.66e+003	N/A	1.20e+005	0.106	N/A
57	CCV 5 ppb	Unknown	12/11/2023 2:08:3	121123_perc	1.00	Perc C37	5.78e+004	N/A	7.58e+004	5.25	N/A
58	CCV 5 ppb	Unknown	12/11/2023 2:08:3	121123_perc	1.00	Perc C35	1.80e+005	N/A	7.58e+004	5.72	N/A

Subsequent samples failed ±30% ICV check. Cleaned MS and re-injected (next page).

UB 12/18

	Sample Name	Sample Type	Acquisition Date	File Name	Dilution Factor	Analyte Peak Name	Analyte Peak Area (counts)	Analyte Concentration (ng/ml)	IS Peak Area (counts)	Calculated Concentration (ng/ml)	Accuracy (%)
1	50 ppb ICAL	Standard	12/12/2023 8:47:3	121223_perc	1.00	Perc C37	8.16e+005	50.0	1.17e+005	48.7	97.5
2	50 ppb ICAL	Standard	12/12/2023 8:47:3	121223_perc	1.00	Perc C35	2.48e+006	50.0	1.17e+005	50.1	100.
3	20 ppb ICAL	Standard	12/12/2023 8:57:0	121223_perc	1.00	Perc C37	3.92e+005	20.0	1.32e+005	19.8	99.0
4	20 ppb ICAL	Standard	12/12/2023 8:57:0	121223_perc	1.00	Perc C35	1.15e+006	20.0	1.32e+005	19.4	97.0
5	50 ppb ICAL	Standard	12/12/2023 9:04:1	121223_perc	1.00	Perc C37	9.53e+005	50.0	1.31e+005	51.1	102.
6	50 ppb ICAL	Standard	12/12/2023 9:04:1	121223_perc	1.00	Perc C35	2.76e+006	50.0	1.31e+005	49.9	99.8
7	20 ppb ICAL	Standard	12/12/2023 9:11:3	121223_perc	1.00	Perc C37	4.46e+005	20.0	1.43e+005	20.7	103.
8	20 ppb ICAL	Standard	12/12/2023 9:11:3	121223_perc	1.00	Perc C35	1.33e+006	20.0	1.43e+005	20.7	103.
9	10 ppb ICAL	Standard	12/12/2023 9:18:4	121223_perc	1.00	Perc C37	2.33e+005	10.0	1.52e+005	9.99	99.9
10	10 ppb ICAL	Standard	12/12/2023 9:18:4	121223_perc	1.00	Perc C35	6.94e+005	10.0	1.52e+005	9.95	99.5
11	5 ppb ICAL	Standard	12/12/2023 9:26:0	121223_perc	1.00	Perc C37	1.16e+005	5.00	1.57e+005	4.77	95.4
12	5 ppb ICAL	Standard	12/12/2023 9:26:0	121223_perc	1.00	Perc C35	3.58e+005	5.00	1.57e+005	4.94	98.7
13	1 ppb ICAL	Standard	12/12/2023 9:33:1	121223_perc	1.00	Perc C37	2.31e+004	1.00	1.57e+005	0.938	93.8
14	1 ppb ICAL	Standard	12/12/2023 9:33:1	121223_perc	1.00	Perc C35	7.75e+004	1.00	1.57e+005	1.05	105.
15	0.2 ppb ICAL	Standard	12/12/2023 9:40:3	121223_perc	1.00	Perc C37	5.06e+003	0.200	1.59e+005	0.196	97.8
16	0.2 ppb ICAL	Standard	12/12/2023 9:40:3	121223_perc	1.00	Perc C35	1.57e+004	0.200	1.59e+005	0.207	104.
17	0.05 ppb ICAL	Standard	12/12/2023 9:47:5	121223_perc	1.00	Perc C37	1.70e+003	0.0500	1.68e+005	0.0555	111.
18	0.05 ppb ICAL	Standard	12/12/2023 9:47:5	121223_perc	1.00	Perc C35	3.95e+003	0.0500	1.68e+005	0.0462	92.3
19	16 ppb ICV	Quality Co	12/12/2023 9:55:1	121223_perc	1.00	Perc C37	3.72e+005	16.0	1.59e+005	15.4	96.5
20	16 ppb ICV	Quality Co	12/12/2023 9:55:1	121223_perc	1.00	Perc C35	1.12e+006	16.0	1.59e+005	15.6	97.4
21	MDK0735-08 20uL	Unknown	12/12/2023 10:09:	121223_perc	1.00	Perc C37	3.28e+004	N/A	1.59e+005	1.32	N/A
22	MDK0735-08 20uL	Unknown	12/12/2023 10:09:	121223_perc	1.00	Perc C35	1.01e+005	N/A	1.59e+005	1.36	N/A
23	BDL0321-MS2 20uL	Unknown	12/12/2023 10:17:	121223_perc	1.00	Perc C37	1.45e+005	N/A	1.58e+005	5.95	N/A
24	BDL0321-MS2 20uL	Unknown	12/12/2023 10:17:	121223_perc	1.00	Perc C35	4.72e+005	N/A	1.58e+005	6.48	N/A
25	BDL0321-MSD2 20uL	Unknown	12/12/2023 10:24:	121223_perc	1.00	Perc C37	1.57e+005	N/A	1.63e+005	6.24	N/A
26	BDL0321-MSD2 20uL	Unknown	12/12/2023 10:24:	121223_perc	1.00	Perc C35	4.80e+005	N/A	1.63e+005	6.38	N/A
27	MDL0022-03 20uL	Unknown	12/12/2023 10:31:	121223_perc	1.00	Perc C37	8.39e+004	N/A	1.63e+005	3.32	N/A
28	MDL0022-03 20uL	Unknown	12/12/2023 10:31:	121223_perc	1.00	Perc C35	2.63e+005	N/A	1.63e+005	3.48	N/A
29	MDL0022-04 20uL	Unknown	12/12/2023 10:38:	121223_perc	1.00	Perc C37	1.50e+005	N/A	1.62e+005	6.00	N/A

	Sample Name	Sample Type	Acquisition Date	File Name	Dilution Factor	Analyte Peak Name	Analyte Peak Area (counts)	Analyte Concentration (ng/ml)	IS Peak Area (counts)	Calculated Concentration (ng/ml)	Accuracy (%)
30	MDL0022-04 20uL	Unknown	12/12/2023 10:38:	121223_perc	1.00	Perc C35	4.59e+005	N/A	1.62e+005	6.14	N/A
31	MDL0022-05 20uL	Unknown	12/12/2023 10:46:	121223_perc	1.00	Perc C37	2.81e+005	N/A	1.58e+005	11.6	N/A
32	MDL0022-05 20uL	Unknown	12/12/2023 10:46:	121223_perc	1.00	Perc C35	8.28e+005	N/A	1.58e+005	11.5	N/A
33	MDL0022-06 20uL	Unknown	12/12/2023 10:53:	121223_perc	1.00	Perc C37	8.21e+004	N/A	1.63e+005	3.25	N/A
34	MDL0022-06 20uL	Unknown	12/12/2023 10:53:	121223_perc	1.00	Perc C35	2.61e+005	N/A	1.63e+005	3.45	N/A
35	MDL0022-07 20uL	Unknown	12/12/2023 11:00:	121223_perc	1.00	Perc C37	1.51e+005	N/A	1.63e+005	6.02	N/A
36	MDL0022-07 20uL	Unknown	12/12/2023 11:00:	121223_perc	1.00	Perc C35	4.64e+005	N/A	1.63e+005	6.18	N/A
37	CCV 5 ppb	Unknown	12/12/2023 11:07:	121223_perc	1.00	Perc C37	1.30e+005	N/A	1.70e+005	4.94	N/A
38	CCV 5 ppb	Unknown	12/12/2023 11:07:	121223_perc	1.00	Perc C35	3.93e+005	N/A	1.70e+005	4.99	N/A
39	MDL0022-09 20uL	Unknown	12/12/2023 11:15:	121223_perc	1.00	Perc C37	1.14e+005	N/A	1.67e+005	4.40	N/A
40	MDL0022-09 20uL	Unknown	12/12/2023 11:15:	121223_perc	1.00	Perc C35	3.38e+005	N/A	1.67e+005	4.36	N/A
41	MDL0022-10 20uL	Unknown	12/12/2023 11:22:	121223_perc	1.00	Perc C37	3.05e+004	N/A	1.65e+005	1.18	N/A
42	MDL0022-10 20uL	Unknown	12/12/2023 11:22:	121223_perc	1.00	Perc C35	9.20e+004	N/A	1.65e+005	1.20	N/A
43	MDL0102-01 20uL	Unknown	12/12/2023 11:29:	121223_perc	1.00	Perc C37	9.89e+004	N/A	1.64e+005	3.89	N/A
44	MDL0102-01 20uL	Unknown	12/12/2023 11:29:	121223_perc	1.00	Perc C35	3.16e+005	N/A	1.64e+005	4.15	N/A
45	MDL0102-02 20uL	Unknown	12/12/2023 11:37:	121223_perc	1.00	Perc C37	8.76e+004	N/A	1.64e+005	3.44	N/A
46	MDL0102-02 20uL	Unknown	12/12/2023 11:37:	121223_perc	1.00	Perc C35	2.73e+005	N/A	1.64e+005	3.59	N/A
47	MDL0103-01 20uL	Unknown	12/12/2023 11:44:	121223_perc	1.00	Perc C37	6.89e+004	N/A	1.65e+005	2.68	N/A
48	MDL0103-01 20uL	Unknown	12/12/2023 11:44:	121223_perc	1.00	Perc C35	2.13e+005	N/A	1.65e+005	2.77	N/A
49	MDL0103-02 20uL	Unknown	12/12/2023 11:51:	121223_perc	1.00	Perc C37	4.19e+004	N/A	1.78e+005	1.51	N/A
50	MDL0103-02 20uL	Unknown	12/12/2023 11:51:	121223_perc	1.00	Perc C35	1.29e+005	N/A	1.78e+005	1.56	N/A
51	CCV 5 ppb	Unknown	12/12/2023 12:13:	121223_perc	1.00	Perc C37	1.29e+005	N/A	1.71e+005	4.89	N/A
52	CCV 5 ppb	Unknown	12/12/2023 12:13:	121223_perc	1.00	Perc C35	3.94e+005	N/A	1.71e+005	5.00	N/A
53	16 ppb ICV	Quality Co	12/12/2023 6:12:5	121223_perc	1.00	Perc C37	3.97e+005	16.0	1.81e+005	14.4	90.0
54	16 ppb ICV	Quality Co	12/12/2023 6:12:5	121223_perc	1.00	Perc C35	1.14e+006	16.0	1.81e+005	13.9	86.6
55	CCV 5 ppb	Unknown	12/12/2023 6:20:1	121223_perc	1.00	Perc C37	1.32e+005	N/A	1.85e+005	4.60	N/A
56	CCV 5 ppb	Unknown	12/12/2023 6:20:1	121223_perc	1.00	Perc C35	3.76e+005	N/A	1.85e+005	4.39	N/A
57	MDK0709-12	Unknown	12/12/2023 6:27:3	121223_perc	1.00	Perc C37	2.67e+003	N/A	2.09e+005	0.0725	N/A
58	MDK0709-12	Unknown	12/12/2023 6:27:3	121223_perc	1.00	Perc C35	7.87e+003	N/A	2.09e+005	0.0764	N/A

	Sample Name	Sample Type	Acquisition Date	File Name	Dilution Factor	Analyte Peak Name	Analyte Peak Area (counts)	Analyte Concentration (ng/ml)	IS Peak Area (counts)	Calculated Concentration (ng/ml)	Accuracy (%)
59	MDK0709-13	Unknown	12/12/2023 6:34:5	121223_perc	1.00	Perc C37	0.00e+000	N/A	1.82e+005	No Peak	N/A
60	MDK0709-13	Unknown	12/12/2023 6:34:5	121223_perc	1.00	Perc C35	0.00e+000	N/A	1.82e+005	No Peak	N/A
61	MDK0735-01	Unknown	12/12/2023 6:42:1	121223_perc	1.00	Perc C37	5.88e+003	N/A	1.85e+005	0.195	N/A
62	MDK0735-01	Unknown	12/12/2023 6:42:1	121223_perc	1.00	Perc C35	1.84e+004	N/A	1.85e+005	0.208	N/A
63	MDK0735-02	Unknown	12/12/2023 6:49:2	121223_perc	1.00	Perc C37	2.13e+003	N/A	1.57e+005	0.0776	N/A
64	MDK0735-02	Unknown	12/12/2023 6:49:2	121223_perc	1.00	Perc C35	7.82e+003	N/A	1.57e+005	0.103	N/A
65	MDK0735-03	Unknown	12/12/2023 6:56:4	121223_perc	1.00	Perc C37	1.77e+003	N/A	1.85e+005	0.0521	N/A
66	MDK0735-03	Unknown	12/12/2023 6:56:4	121223_perc	1.00	Perc C35	4.43e+003	N/A	1.85e+005	0.0470	N/A
67	MDK0735-04	Unknown	12/12/2023 7:04:0	121223_perc	1.00	Perc C37	2.95e+003	N/A	1.89e+005	0.0910	N/A
68	MDK0735-04	Unknown	12/12/2023 7:04:0	121223_perc	1.00	Perc C35	8.81e+003	N/A	1.89e+005	0.0957	N/A
69	MDK0735-05	Unknown	12/12/2023 7:11:1	121223_perc	1.00	Perc C37	3.71e+004	N/A	1.87e+005	1.27	N/A
70	MDK0735-05	Unknown	12/12/2023 7:11:1	121223_perc	1.00	Perc C35	1.08e+005	N/A	1.87e+005	1.24	N/A
71	MDK0735-06	Unknown	12/12/2023 7:18:3	121223_perc	1.00	Perc C37	4.38e+004	N/A	1.85e+005	1.51	N/A
72	MDK0735-06	Unknown	12/12/2023 7:18:3	121223_perc	1.00	Perc C35	1.22e+005	N/A	1.85e+005	1.41	N/A
73	CCV 5 ppb	Unknown	12/12/2023 7:25:4	121223_perc	1.00	Perc C37	1.33e+005	N/A	1.73e+005	4.96	N/A
74	CCV 5 ppb	Unknown	12/12/2023 7:25:4	121223_perc	1.00	Perc C35	3.72e+005	N/A	1.73e+005	4.65	N/A
75	BDL0321-BLK2	Unknown	12/12/2023 7:33:0	121223_perc	1.00	Perc C37	0.00e+000	N/A	1.74e+005	No Peak	N/A
76	BDL0321-BLK2	Unknown	12/12/2023 7:33:0	121223_perc	1.00	Perc C35	0.00e+000	N/A	1.74e+005	No Peak	N/A
77	BDL0321-BS2	Unknown	12/12/2023 7:40:2	121223_perc	1.00	Perc C37	1.37e+005	N/A	1.80e+005	4.93	N/A
78	BDL0321-BS2	Unknown	12/12/2023 7:40:2	121223_perc	1.00	Perc C35	3.91e+005	N/A	1.80e+005	4.69	N/A
79	BDL0321-MRL1	Unknown	12/12/2023 7:47:4	121223_perc	1.00	Perc C37	2.14e+003	N/A	1.98e+005	0.0599	N/A
80	BDL0321-MRL1	Unknown	12/12/2023 7:47:4	121223_perc	1.00	Perc C35	5.75e+003	N/A	1.98e+005	0.0579	N/A
81	MDK0735-07	Unknown	12/12/2023 8:09:3	121223_perc	1.00	Perc C37	1.02e+004	N/A	1.85e+005	0.346	N/A
82	MDK0735-07	Unknown	12/12/2023 8:09:3	121223_perc	1.00	Perc C35	2.56e+004	N/A	1.85e+005	0.292	N/A
83	MDK0735-09	Unknown	12/12/2023 8:24:0	121223_perc	1.00	Perc C37	4.80e+005	N/A	1.85e+005	17.2	N/A
84	MDK0735-09	Unknown	12/12/2023 8:24:0	121223_perc	1.00	Perc C35	1.37e+006	N/A	1.85e+005	16.4	N/A
85	MDL0022-01	Unknown	12/12/2023 8:31:2	121223_perc	1.00	Perc C37	4.10e+005	N/A	1.71e+005	15.8	N/A
86	MDL0022-01	Unknown	12/12/2023 8:31:2	121223_perc	1.00	Perc C35	1.15e+006	N/A	1.71e+005	14.8	N/A
87	MDL0022-02	Unknown	12/12/2023 8:38:4	121223_perc	1.00	Perc C37	4.66e+005	N/A	1.86e+005	16.6	N/A

	Sample Name	Sample Type	Acquisition Date	File Name	Dilution Factor	Analyte Peak Name	Analyte Peak Area (counts)	Analyte Concentration (ng/ml)	IS Peak Area (counts)	Calculated Concentration (ng/ml)	Accuracy (%)
88	MDL0022-02	Unknown	12/12/2023 8:38:4	121223_perc	1.00	Perc C35	1.35e+006	N/A	1.86e+005	16.1	N/A
89	CCV 5 ppb	Unknown	12/12/2023 8:46:0	121223_perc	1.00	Perc C37	1.45e+005	N/A	1.94e+005	4.81	N/A
90	CCV 5 ppb	Unknown	12/12/2023 8:46:0	121223_perc	1.00	Perc C35	4.08e+005	N/A	1.94e+005	4.53	N/A

## Perchlorate IS Calculation Sheet      Calculates %Recovery vs ICV

## Instructions:

Open .txt file in Excel

Copy all data rows (starting with the column headings)

Paste data rows to the TXT Data tab below (starting at A1)

ICV IS Area and Recoveries are calculated automatically

ICV IS Value

168000

Sample Name	IS Recovery	Acquisition Date	Analyte Peak Name	Analyte Peak Area (counts)	IS Peak Name	IS Peak Area (counts)
50 ppb ICAL	98.2	12/11/2023 9:46	Perc C35	3.16E+06	Perc IS	1.65E+05
20 ppb ICAL	63.1	12/11/2023 9:53	Perc C37	2.99E+05	Perc IS	1.06E+05
20 ppb ICAL	63.1	12/11/2023 9:53	Perc C35	8.61E+05	Perc IS	1.06E+05
10 ppb ICAL	103.6	12/11/2023 10:01	Perc C37	2.52E+05	Perc IS	1.74E+05
10 ppb ICAL	103.6	12/11/2023 10:01	Perc C35	7.13E+05	Perc IS	1.74E+05
5 ppb ICAL	106.5	12/11/2023 10:08	Perc C37	1.30E+05	Perc IS	1.79E+05
5 ppb ICAL	106.5	12/11/2023 10:08	Perc C35	3.72E+05	Perc IS	1.79E+05
1 ppb ICAL	105.4	12/11/2023 10:15	Perc C37	2.71E+04	Perc IS	1.77E+05
1 ppb ICAL	105.4	12/11/2023 10:15	Perc C35	7.88E+04	Perc IS	1.77E+05
0.2 ppb ICAL	107.7	12/11/2023 10:22	Perc C37	5.66E+03	Perc IS	1.81E+05
0.2 ppb ICAL	107.7	12/11/2023 10:22	Perc C35	1.47E+04	Perc IS	1.81E+05
0.05 ppb ICAL	107.1	12/11/2023 10:30	Perc C37	2.09E+03	Perc IS	1.80E+05
0.05 ppb ICAL	107.1	12/11/2023 10:30	Perc C35	4.29E+03	Perc IS	1.80E+05
16 ppb ICV	100.0	12/11/2023 10:37	Perc C37	3.85E+05	Perc IS	1.68E+05
16 ppb ICV	100.0	12/11/2023 10:37	Perc C35	1.12E+06	Perc IS	1.68E+05
BDL0321-BLK1	104.2	12/11/2023 10:44	Perc C37	0.00E+00	Perc IS	1.75E+05
BDL0321-BLK1	104.2	12/11/2023 10:44	Perc C35	0.00E+00	Perc IS	1.75E+05
BDL0321-BS1	101.8	12/11/2023 10:51	Perc C37	1.31E+05	Perc IS	1.71E+05
BDL0321-BS1	101.8	12/11/2023 10:51	Perc C35	3.73E+05	Perc IS	1.71E+05
BDL0320-MRL1	103.6	12/11/2023 10:59	Perc C37	1.94E+03	Perc IS	1.74E+05
BDL0320-MRL1	103.6	12/11/2023 10:59	Perc C35	4.98E+03	Perc IS	1.74E+05
MDL0099-01	107.1	12/11/2023 11:06	Perc C37	2.80E+03	Perc IS	1.80E+05
MDL0099-01	107.1	12/11/2023 11:06	Perc C35	7.25E+03	Perc IS	1.80E+05
BDL0320-MS1	85.7	12/11/2023 11:13	Perc C37	1.10E+05	Perc IS	1.44E+05
BDL0320-MS1	85.7	12/11/2023 11:13	Perc C35	3.14E+05	Perc IS	1.44E+05
BDL0320-MSD1	92.9	12/11/2023 11:21	Perc C37	1.14E+05	Perc IS	1.56E+05
BDL0320-MSD1	92.9	12/11/2023 11:21	Perc C35	3.42E+05	Perc IS	1.56E+05
BDL0321-MS1	103.0	12/11/2023 11:28	Perc C37	1.28E+05	Perc IS	1.73E+05
BDL0321-MS1	103.0	12/11/2023 11:28	Perc C35	3.75E+05	Perc IS	1.73E+05
BDL0321-MSD1	101.2	12/11/2023 11:35	Perc C37	1.29E+05	Perc IS	1.70E+05
BDL0321-MSD1	101.2	12/11/2023 11:35	Perc C35	3.79E+05	Perc IS	1.70E+05
MDK0709-01	104.8	12/11/2023 11:42	Perc C37	2.73E+03	Perc IS	1.76E+05
MDK0709-01	104.8	12/11/2023 11:42	Perc C35	7.92E+03	Perc IS	1.76E+05
MDK0709-02	98.8	12/11/2023 11:50	Perc C37	2.44E+03	Perc IS	1.66E+05
MDK0709-02	98.8	12/11/2023 11:50	Perc C35	6.83E+03	Perc IS	1.66E+05
MDK0709-03	91.7	12/11/2023 11:57	Perc C37	2.95E+03	Perc IS	1.54E+05
MDK0709-03	91.7	12/11/2023 11:57	Perc C35	8.49E+03	Perc IS	1.54E+05
MDK0709-04	103.6	12/11/2023 12:04	Perc C37	4.00E+03	Perc IS	1.74E+05
MDK0709-04	103.6	12/11/2023 12:04	Perc C35	1.17E+04	Perc IS	1.74E+05
MDK0709-05	94.6	12/11/2023 12:12	Perc C37	2.37E+03	Perc IS	1.59E+05
MDK0709-05	94.6	12/11/2023 12:12	Perc C35	7.24E+03	Perc IS	1.59E+05
MDK0709-06	98.2	12/11/2023 12:19	Perc C37	2.87E+03	Perc IS	1.65E+05
MDK0709-06	98.2	12/11/2023 12:19	Perc C35	9.58E+03	Perc IS	1.65E+05
MDK0709-07	92.3	12/11/2023 12:26	Perc C37	1.64E+03	Perc IS	1.55E+05
MDK0709-07	92.3	12/11/2023 12:26	Perc C35	6.33E+03	Perc IS	1.55E+05
MDK0709-08	73.8	12/11/2023 12:33	Perc C37	2.00E+03	Perc IS	1.24E+05
MDK0709-08	73.8	12/11/2023 12:33	Perc C35	5.56E+03	Perc IS	1.24E+05
MDK0709-09	97.6	12/11/2023 12:41	Perc C37	2.30E+03	Perc IS	1.64E+05
MDK0709-09	97.6	12/11/2023 12:41	Perc C35	6.37E+03	Perc IS	1.64E+05
CCV 5 ppb	101.2	12/11/2023 12:48	Perc C37	1.23E+05	Perc IS	1.70E+05

ICV IS Value

168000

Sample Name	IS Recovery	Acquisition Date	Analyte Peak Name	Analyte Peak Area (counts)	IS Peak Name	IS Peak Area (counts)
CCV 5 ppb	101.2	12/11/2023 12:48	Perc C35	3.67E+05	Perc IS	1.70E+05
MDK0709-10	97.6	12/11/2023 12:55	Perc C37	2.79E+03	Perc IS	1.64E+05
MDK0709-10	97.6	12/11/2023 12:55	Perc C35	8.45E+03	Perc IS	1.64E+05
MDK0709-11	71.4	12/11/2023 13:02	Perc C37	2.12E+03	Perc IS	1.20E+05
MDK0709-11	71.4	12/11/2023 13:02	Perc C35	5.66E+03	Perc IS	1.20E+05
CCV 5 ppb	45.1	12/11/2023 14:08	Perc C37	5.78E+04	Perc IS	7.58E+04
CCV 5 ppb	45.1	12/11/2023 14:08	Perc C35	1.80E+05	Perc IS	7.58E+04

Perchlorate IS Calculation Sheet      Calculates %Recovery vs ICV

Instructions:

Open .txt file in Excel  
 Copy all data rows (starting with the column headings)  
 Paste data rows to the TXT Data tab below (starting at A1)  
 ICV IS Area and Recoveries are calculated automatically

ICV IS Value      181000

Sample Name	IS Recovery	Acquisition Date	Analyte Peak Name	Analyte Peak Area (counts)	IS Peak Name	IS Peak Area (counts)	
50 ppb ICAL	64.6	12/12/2023 8:47	Perc C35	2.48E+06	Perc IS	1.17E+05	
20 ppb ICAL	72.9	12/12/2023 8:57	Perc C37	3.92E+05	Perc IS	1.32E+05	
20 ppb ICAL	72.9	12/12/2023 8:57	Perc C35	1.15E+06	Perc IS	1.32E+05	
50 ppb ICAL	72.4	12/12/2023 9:04	Perc C37	9.53E+05	Perc IS	1.31E+05	
50 ppb ICAL	72.4	12/12/2023 9:04	Perc C35	2.76E+06	Perc IS	1.31E+05	
20 ppb ICAL	79.0	12/12/2023 9:11	Perc C37	4.46E+05	Perc IS	1.43E+05	
20 ppb ICAL	79.0	12/12/2023 9:11	Perc C35	1.33E+06	Perc IS	1.43E+05	
10 ppb ICAL	84.0	12/12/2023 9:18	Perc C37	2.33E+05	Perc IS	1.52E+05	
10 ppb ICAL	84.0	12/12/2023 9:18	Perc C35	6.94E+05	Perc IS	1.52E+05	
5 ppb ICAL	86.7	12/12/2023 9:26	Perc C37	1.16E+05	Perc IS	1.57E+05	
5 ppb ICAL	86.7	12/12/2023 9:26	Perc C35	3.58E+05	Perc IS	1.57E+05	
1 ppb ICAL	86.7	12/12/2023 9:33	Perc C37	2.31E+04	Perc IS	1.57E+05	
1 ppb ICAL	86.7	12/12/2023 9:33	Perc C35	7.75E+04	Perc IS	1.57E+05	
0.2 ppb ICAL	87.8	12/12/2023 9:40	Perc C37	5.06E+03	Perc IS	1.59E+05	
0.2 ppb ICAL	87.8	12/12/2023 9:40	Perc C35	1.57E+04	Perc IS	1.59E+05	
0.05 ppb ICAL	92.8	12/12/2023 9:47	Perc C37	1.70E+03	Perc IS	1.68E+05	
0.05 ppb ICAL	92.8	12/12/2023 9:47	Perc C35	3.95E+03	Perc IS	1.68E+05	
16 ppb ICV	87.8	12/12/2023 9:55	Perc C37	3.72E+05	Perc IS	1.59E+05	159000
16 ppb ICV	87.8	12/12/2023 9:55	Perc C35	1.12E+06	Perc IS	1.59E+05	159000
MDK0735-08 20uL	87.8	12/12/2023 10:09	Perc C37	3.28E+04	Perc IS	1.59E+05	
MDK0735-08 20uL	87.8	12/12/2023 10:09	Perc C35	1.01E+05	Perc IS	1.59E+05	
BDL0321-MS2 20uL	87.3	12/12/2023 10:17	Perc C37	1.45E+05	Perc IS	1.58E+05	
BDL0321-MS2 20uL	87.3	12/12/2023 10:17	Perc C35	4.72E+05	Perc IS	1.58E+05	
BDL0321-MSD2 20uL	90.1	12/12/2023 10:24	Perc C37	1.57E+05	Perc IS	1.63E+05	
BDL0321-MSD2 20uL	90.1	12/12/2023 10:24	Perc C35	4.80E+05	Perc IS	1.63E+05	
MDL0022-03 20uL	90.1	12/12/2023 10:31	Perc C37	8.39E+04	Perc IS	1.63E+05	
MDL0022-03 20uL	90.1	12/12/2023 10:31	Perc C35	2.63E+05	Perc IS	1.63E+05	
MDL0022-04 20uL	89.5	12/12/2023 10:38	Perc C37	1.50E+05	Perc IS	1.62E+05	
MDL0022-04 20uL	89.5	12/12/2023 10:38	Perc C35	4.59E+05	Perc IS	1.62E+05	
MDL0022-05 20uL	87.3	12/12/2023 10:46	Perc C37	2.81E+05	Perc IS	1.58E+05	
MDL0022-05 20uL	87.3	12/12/2023 10:46	Perc C35	8.28E+05	Perc IS	1.58E+05	
MDL0022-06 20uL	90.1	12/12/2023 10:53	Perc C37	8.21E+04	Perc IS	1.63E+05	
MDL0022-06 20uL	90.1	12/12/2023 10:53	Perc C35	2.61E+05	Perc IS	1.63E+05	
MDL0022-07 20uL	90.1	12/12/2023 11:00	Perc C37	1.51E+05	Perc IS	1.63E+05	
MDL0022-07 20uL	90.1	12/12/2023 11:00	Perc C35	4.64E+05	Perc IS	1.63E+05	
CCV 5 ppb	93.9	12/12/2023 11:07	Perc C37	1.30E+05	Perc IS	1.70E+05	
CCV 5 ppb	93.9	12/12/2023 11:07	Perc C35	3.93E+05	Perc IS	1.70E+05	
MDL0022-09 20uL	92.3	12/12/2023 11:15	Perc C37	1.14E+05	Perc IS	1.67E+05	
MDL0022-09 20uL	92.3	12/12/2023 11:15	Perc C35	3.38E+05	Perc IS	1.67E+05	
MDL0022-10 20uL	91.2	12/12/2023 11:22	Perc C37	3.05E+04	Perc IS	1.65E+05	
MDL0022-10 20uL	91.2	12/12/2023 11:22	Perc C35	9.20E+04	Perc IS	1.65E+05	
MDL0102-01 20uL	90.6	12/12/2023 11:29	Perc C37	9.89E+04	Perc IS	1.64E+05	
MDL0102-01 20uL	90.6	12/12/2023 11:29	Perc C35	3.16E+05	Perc IS	1.64E+05	
MDL0102-02 20uL	90.6	12/12/2023 11:37	Perc C37	8.76E+04	Perc IS	1.64E+05	
MDL0102-02 20uL	90.6	12/12/2023 11:37	Perc C35	2.73E+05	Perc IS	1.64E+05	
MDL0103-01 20uL	91.2	12/12/2023 11:44	Perc C37	6.89E+04	Perc IS	1.65E+05	
MDL0103-01 20uL	91.2	12/12/2023 11:44	Perc C35	2.13E+05	Perc IS	1.65E+05	
MDL0103-02 20uL	98.3	12/12/2023 11:51	Perc C37	4.19E+04	Perc IS	1.78E+05	
MDL0103-02 20uL	98.3	12/12/2023 11:51	Perc C35	1.29E+05	Perc IS	1.78E+05	
CCV 5 ppb	94.5	12/12/2023 12:13	Perc C37	1.29E+05	Perc IS	1.71E+05	
CCV 5 ppb	94.5	12/12/2023 12:13	Perc C35	3.94E+05	Perc IS	1.71E+05	
16 ppb ICV	100.0	12/12/2023 18:12	Perc C37	3.97E+05	Perc IS	1.81E+05	181000
16 ppb ICV	100.0	12/12/2023 18:12	Perc C35	1.14E+06	Perc IS	1.81E+05	181000
CCV 5 ppb	102.2	12/12/2023 18:20	Perc C37	1.32E+05	Perc IS	1.85E+05	

ICV IS Value

181000

Sample Name	IS Recovery	Acquisition Date	Analyte Peak Name	Analyte Peak Area (counts)	IS Peak Name	IS Peak Area (counts)
CCV 5 ppb	102.2	12/12/2023 18:20	Perc C35	3.76E+05	Perc IS	1.85E+05
MDK0709-12	115.5	12/12/2023 18:27	Perc C37	2.67E+03	Perc IS	2.09E+05
MDK0709-12	115.5	12/12/2023 18:27	Perc C35	7.87E+03	Perc IS	2.09E+05
MDK0709-13	100.6	12/12/2023 18:34	Perc C37	0.00E+00	Perc IS	1.82E+05
MDK0709-13	100.6	12/12/2023 18:34	Perc C35	0.00E+00	Perc IS	1.82E+05
MDK0735-01	102.2	12/12/2023 18:42	Perc C37	5.88E+03	Perc IS	1.85E+05
MDK0735-01	102.2	12/12/2023 18:42	Perc C35	1.84E+04	Perc IS	1.85E+05
MDK0735-02	86.7	12/12/2023 18:49	Perc C37	2.13E+03	Perc IS	1.57E+05
MDK0735-02	86.7	12/12/2023 18:49	Perc C35	7.82E+03	Perc IS	1.57E+05
MDK0735-03	102.2	12/12/2023 18:56	Perc C37	1.77E+03	Perc IS	1.85E+05
MDK0735-03	102.2	12/12/2023 18:56	Perc C35	4.43E+03	Perc IS	1.85E+05
MDK0735-04	104.4	12/12/2023 19:04	Perc C37	2.95E+03	Perc IS	1.89E+05
MDK0735-04	104.4	12/12/2023 19:04	Perc C35	8.81E+03	Perc IS	1.89E+05
MDK0735-05	103.3	12/12/2023 19:11	Perc C37	3.71E+04	Perc IS	1.87E+05
MDK0735-05	103.3	12/12/2023 19:11	Perc C35	1.08E+05	Perc IS	1.87E+05
MDK0735-06	102.2	12/12/2023 19:18	Perc C37	4.38E+04	Perc IS	1.85E+05
MDK0735-06	102.2	12/12/2023 19:18	Perc C35	1.22E+05	Perc IS	1.85E+05
CCV 5 ppb	95.6	12/12/2023 19:25	Perc C37	1.33E+05	Perc IS	1.73E+05
CCV 5 ppb	95.6	12/12/2023 19:25	Perc C35	3.72E+05	Perc IS	1.73E+05
BDL0321-BLK2	96.1	12/12/2023 19:33	Perc C37	0.00E+00	Perc IS	1.74E+05
BDL0321-BLK2	96.1	12/12/2023 19:33	Perc C35	0.00E+00	Perc IS	1.74E+05
BDL0321-BS2	99.4	12/12/2023 19:40	Perc C37	1.37E+05	Perc IS	1.80E+05

Starting sequence Thu Nov 30 08:50:35 2023

BDK1092  
BDK1093  
BDK1097

Instrument Name: MSD1

Sequence File: C:\msdchem\1\sequence\112823.S

Comment:

Operator: BKP

Data Path: C:\MSDCHEM\1\DATA\2023 NOV\30\

Method Path: C:\MSDCHEM\1\METHODS\

BKP  
12/4/23

Line Type	Vial	DataFile	Method	Sample Name
1) Sample	1	00101001	8260PC30	RINSE
2) Sample	2	00201002	8260PC30	BLANK
3) Sample	3	00301003	8260PC30	10 PPB VOC CCV
4) Sample	4	00401004	8260PC30	RINSE
5) Sample	5	00501005	8260PC30	MDK0709-07
6) Sample	6	00601006	8260PC30	MDK0709-01
7) Sample	7	00701007	8260PC30	MDK0709-02
8) Sample	8	00801008	8260PC30	MDK0709-03
9) Sample	9	00901009	8260PC30	MDK0709-04
10) Sample	10	01001010	8260PC30	MDK0709-05
11) Sample	11	01101011	8260PC30	MDK0709-06
12) Sample	12	01201012	8260PC30	MDK0709-08
13) Sample	13	01301013	8260PC30	MDK0709-09
14) Sample	14	01401014	8260PC30	MDK0709-10
15) Sample	15	01501015	8260PC30	MDK0709-11
16) Sample	16	01601016	8260PC30	MDK0709-12
17) Sample	17	01701017	8260PC30	MDK0709-13
18) Sample	18	01801018	8260PC30	MDK0709-14
19) Sample	19	01901019	8260PC30	MDK0690-01 - Analyzed at a dilution 12/5/23
20) Sample	20	02001020	8260PC30	MDK0649-01
21) Sample	21	02101021	8260PC30	MDK0649-02 - Analyzed at a dilution 12/5/23
22) Sample	22	02201022	8260PC30	RINSE
23) Sample	23	02301023	8260PC30	MDK0709-07 MS
24) Sample	24	02401024	8260PC30	MDK0709-07 MSD
25) Sample	25	02501025	8260PC30	RINSE
26) Sample	26	02601026	8260PC30	10 PPB VOC CCV 2
27) Sample	27	02701027	8260PC30	RINSE

Sequence completed Thu Nov 30 22:03:55 2023

C:\MSDCHEM\1\DATA\2023 NOV\30\2023 Nov 30 0850 Quality Log.LOG

C:\MSDCHEM\1\DATA\2023 NOV\30\2023 Nov 30 0850 Sequence Log .LOG

QC Checklist for EPA 8260/624.1 - VOCs

Analysis Date: 11/30/23

<input checked="" type="checkbox"/>	QC Parameter	Acceptance Criteria	Frequency	Notes
<input checked="" type="checkbox"/>	BFB Tune	See below		
<input checked="" type="checkbox"/>	Initial Calibration	90% must meet <20%RSD	At least 6 points	If regression is used, weight as 1/x, with R <sup>2</sup> > 0.920
<input checked="" type="checkbox"/>	Initial Calibration	Reprocessed cal points must be within 70-130%		
<input checked="" type="checkbox"/>	Response Factor	Check against list on back		Include CCV RF report in data packet
<input checked="" type="checkbox"/>	Internal Standard	50-200% of mid-point CAL	All samples	
<input checked="" type="checkbox"/>	Surrogate Recovery	85-115%	All samples	
<input checked="" type="checkbox"/>	ICV/QCS	70-130%	Each ICAL	
<input checked="" type="checkbox"/>	Blanks	No interferences	Every 20 samples	
<input checked="" type="checkbox"/>	CCV	80% within ±20%	At beginning of run and every 12 hours.	
<input checked="" type="checkbox"/>	MS/MSD	±20%	Every 20 samples	
<input checked="" type="checkbox"/>	Cal Prep Form Present			
<input checked="" type="checkbox"/>	pH/Chlorine checks	pH<2 THM Chlorine check	All samples	
<input checked="" type="checkbox"/>	Dilutions Noted?			

Comments:

m/z	Required Intensity (relative abundance)
50	15 to 40% of m/z 95
75	30 to 60% of m/z 95
95	Base peak, 100% relative abundance
96	5 to 9% of m/z 95
173	Less than 2% of m/z 174
174	50 to 200% of m/z 95
175	5 to 9% of m/z 174
176	95% to 101% of m/z 174
177	5 to 9% of m/z 176

Analyst: BMP

Checklist Completed Date: 12/4/23

Reviewed By: [Signature]

Date: 12/13/23



RF Factor Table for EPA 8260/624.1 - VOCs

Analyte	RF	Check if <	Analyte	RF	Check if <
1,1,1-Trichloroethane	0.05		Carbon tetrachloride	0.1	
1,1,2,2-Tetrachloroethane	0.2		Chlorobenzene	0.4	
1,1,2-Trichloroethane	0.2		Chlorodibromomethane	0.2	
1,1-Dichloroethane	0.3		Chloroethane (Ethyl chloride)	0.01	
1,1-Dichloroethylene	0.06		Chloroform	0.3	
1,2,3-Trichloropropane	0.4		cis-1,2-Dichloroethylene	0.2	
1,2,4-Trichlorobenzene	0.4		cis-1,3-Dichloropropene	0.3	
1,2-Dibromo-3-chloropropane (DBCP)	0.01		Ethylbenzene	0.4	
1,2-Dibromoethane (EDB, Ethylene dibromide)	0.2		Isopropylbenzene	0.4	
1,2-Dichlorobenzene	0.6		m+p-xylene	0.2	
1,2-Dichloroethane (Ethylene dichloride)	0.07		Methyl bromide (Bromomethane)	0.01	
1,2-Dichloropropane	0.2		Methyl chloride (Chloromethane)	0.01	
1,3-Dichlorobenzene	0.5		Methyl tert-butyl ether (MTBE)	0.1	
1,4-Dichlorobenzene	0.6		o-Xylene	0.2	
2-Butanone (Methyl ethyl ketone, MEK)	0.01		Styrene	0.2	
2-Hexanone	0.01		Tetrachloroethylene (Perchloroethylene)	0.1	
4-Methyl-2-pentanone (MIBK)	0.03		Toluene	0.3	
Acetone	0.01		trans-1,2-Dichloroethylene	0.1	
Benzene	0.2		trans-1,3-Dichloropropylene	0.3	
Bromochloromethane	0.1		Trichloroethene (Trichloroethylene)	0.2	
Bromodichloromethane	0.3		Trichlorofluoromethane (Freon 11)	0.01	
Bromoform	0.1		Vinyl chloride	0.01	
Carbon disulfide	0.1				

Taken from Table 4, EPA Method 8260D



# Anatek Labs, Inc

1282 Alturas Drive  
Moscow, ID 83843

## Calibration Standard Preparation Form

Method: EPA 8260/624.1

Initial Calibration and CCV Standard Number: 2302582  
Initial Calibration and CCV Standard Concentration: 200 ug/mL  
Initial Calibration and CCV Standard Expiration Date: 2/28/2026

Matrix Spiking Standard Number: 2302582  
Matrix Spiking Standard Concentration: 200 ug/ml  
Matrix Spiking Standards Expiration Dates: 2/28/2026

Initial Calibration Verification (ICV) Standard Number: 2301142  
Initial Calibration Verification (ICV) Standard Concentration: 200 ug/ml  
Initial Calibration Verification (ICV) Expiration Date: 5/31/2025

Internal Standard / Surrogate Standard Number: 2204337  
Internal Standard / Surrogate Standard Concentration: 125 ug/ml  
Internal Standard / Surrogate Standard Sample Concentration: Archon adds 125 ng to 5 ml  
Expiration Date: 01/04/2024

### Initial Calibration Dilution Template (minimum of 5 calibration points)

Desired Concentration (ppb)	Stock Concentration (ppm)	uL Standard Added	Final Volume (mL)
30	200	7.5	50
20	200	5	50
15	200	7.5	100
10	200	5.0	100
5	200	2.5	100
2	200	1.0	100
0.5	10 ppb Cal std	5 ml	100
<b>ICV 10</b>	<b>200</b>	<b>5</b>	<b>100</b>

Add 2 drops of 1:1 HCl per 50mL to Standards, CCV, ICV, and Reagent Blanks.

### Calibration Prep:

ICAL and ICV Prep Date: 11/27/2023

### Solution Prepared:

- CCV
- MS/MSD
- pH check
- Chlorine check (THM)

pH paper reagent # 2002327  
Free Chlorine Test strip reagent# 2301362

Analyst: Blup  
Form CV02.02 – Eff 9 Dec 2022

Date of Preparation: 11/30/23  
Page 1 of 1

# PREPARATION BENCH SHEET

BDK1093

**Matrix: Solid**

**Prepared using: VOC - VOC**

**Surrogate used: 2302876**

Lab Number	Analysis	Prepared - By	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Client	Extraction Comments
BDK1093-BLK1	QC	11/30/23 09:11-BKP	10	500				100		
BDK1093-BS1	QC	11/30/23 09:11-BKP	10	500	2302582		25	100		
MDK0649-01	VOC 8260	11/30/23 09:11-BKP	0.48	250				50	Alk-Abello Source Materials, Inc.	
MDK0649-02	VOC 8260	11/30/23 09:11-BKP	0.45	250				50	Alk-Abello Source Materials, Inc.	
MDK0690-01	VOC 8260	11/30/23 09:11-BKP	4.32	500				100	Edge Analytical	

Support Info: P-Syringe(s) BAL-09

<u>Reagent</u>	<u>Description</u>	<u>LotNum</u>
2302771	Methanol P&T	62199
2303166	HCl 1:1	-

  
Prepared By: \_\_\_\_\_

12/4/23  
Date: \_\_\_\_\_

11/30/23  
Analytical Run Date: \_\_\_\_\_

# PREPARATION BENCH SHEET

BDK1092

Matrix: Water

Prepared using: VOC - VOC

Surrogate used: 2302876

Lab Number	Analysis	Prepared - By	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Client	Extraction Comments
BDK1092-BLK1	QC	11/30/23 09:35-BKP	50	50				10		
BDK1092-BS1	QC	11/30/23 10:04-BKP	50	50	2302582		2.5	10		
BDK1092-MS1	QC	11/30/23 19:45-BKP	50	50	2302582	MDK0709-07	2.5	10		
BDK1092-MSD1	QC	11/30/23 20:14-BKP	50	50	2302582	MDK0709-07	2.5	10		
MDK0709-01	VOC 8260	11/30/23 11:31-BKP	50	50				10	PBS Engineering - Portland	
MDK0709-02	VOC 8260	11/30/23 12:00-BKP	50	50				10	PBS Engineering - Portland	
MDK0709-03	VOC 8260	11/30/23 12:29-BKP	50	50				10	PBS Engineering - Portland	
MDK0709-04	VOC 8260	11/30/23 12:58-BKP	50	50				10	PBS Engineering - Portland	
MDK0709-05	VOC 8260	11/30/23 13:28-BKP	50	50				10	PBS Engineering - Portland	
MDK0709-06	VOC 8260	11/30/23 13:57-BKP	50	50				10	PBS Engineering - Portland	
MDK0709-07	VOC 8260	11/30/23 11:02-BKP	50	50				10	PBS Engineering - Portland	
MDK0709-07	VOC Trip Blank 8260	11/30/23 09:10-BKP	50	50				10	PBS Engineering - Portland	Added for BatchQC in: BDK1092
MDK0709-08	VOC 8260	11/30/23 14:27-BKP	50	50				10	PBS Engineering - Portland	
MDK0709-09	VOC 8260	11/30/23 14:56-BKP	50	50				10	PBS Engineering - Portland	
MDK0709-10	VOC 8260	11/30/23 15:25-BKP	50	50				10	PBS Engineering - Portland	
MDK0709-11	VOC 8260	11/30/23 15:54-BKP	50	50				10	PBS Engineering - Portland	
MDK0709-12	VOC 8260	11/30/23 16:23-BKP	50	50				10	PBS Engineering - Portland	
MDK0709-13	VOC 8260	11/30/23 16:52-BKP	50	50				10	PBS Engineering - Portland	
MDK0709-14	VOC Trip Blank 8260	11/30/23 17:21-BKP	50	50				10	PBS Engineering - Portland	

Support Info: P-Syringe(s) BAL-09

Reagent	Description	LotNum
2302771	Methanol P&T	62199
2303166	HCl 1:1	-



Prepared By:

12/4/23

Date

11/30/23

Analytical Run Date:

# PREPARATION BENCH SHEET

BDK1097

Matrix: Solid

Prepared using: VOC - VOC

Surrogate used: 2302876

Lab Number	Analysis	Prepared - By	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Client	Extraction Comments
BDK1097-BLK1	QC	11/30/23 09:25-BKP	10	500				100		
BDK1097-BS1	QC	11/30/23 09:25-BKP	10	500	2302582		25	100		
MDK0690-01	VOC 8260 MISC	11/30/23 09:25-BKP	4.32	500				100	Edge Analytical	

Support Info: P-Syringe(s) BAL-09

Reagent	Description	LotNum
2302771	Methanol P&T	62199
2303166	HCl 1:1	-

  
Prepared By:

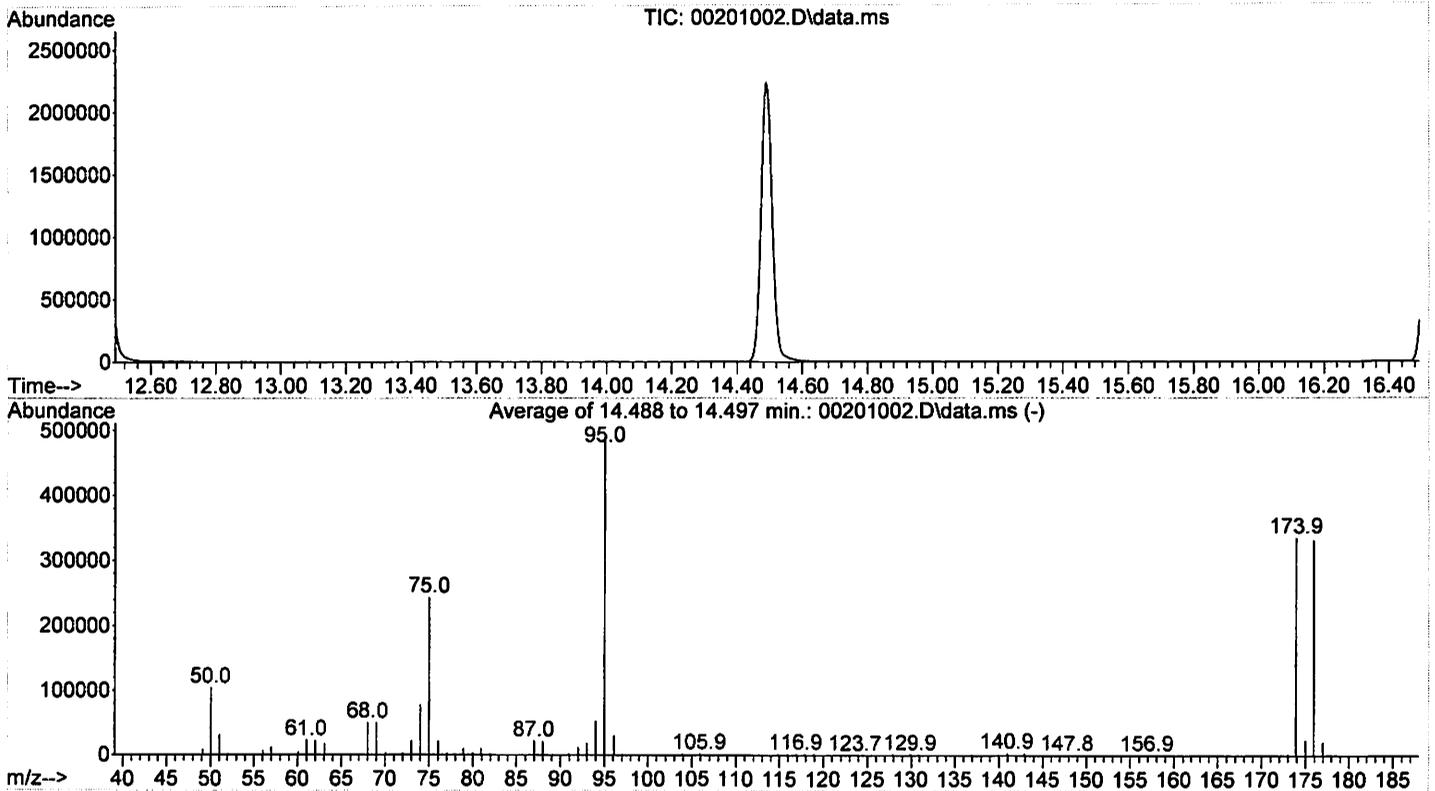
12/4/23  
Date

11/30/23  
Analytical Run Date:

Data Path : T:\Data2\Voc\HP5975\2023 DATA\NOV\30\  
 Data File : 00201002.D  
 Acq On : 30 Nov 2023 9:35 am  
 Operator : BKP  
 Sample : BLANK  
 Misc :  
 ALS Vial : 2 Sample Multiplier: 1

Integration File: rteint.p

Method : T:\Data2\Voc\HP5975\2023 METHODS\NOV27.M  
 Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 Last Update : Mon Nov 27 15:31:54 2023



AutoFind: Scans 2414, 2415, 2416; Background Corrected with Scan 2396

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result
50	95	15	40	21.4	104192	PASS
75	95	30	60	49.9	243285	PASS
95	95	100	100	100.0	487147	PASS
96	95	5	9	6.3	30525	PASS
173	174	0.00	2	0.8	2675	PASS
174	95	50	200	68.7	334805	PASS
175	174	5	9	7.2	24115	PASS
176	174	95	105	98.8	330859	PASS
177	176	5	9	6.4	21037	PASS

## Response Factor Report MSD1

Method Path : T:\Data2\Voc\HP5975\2023 METHODS\  
 Method File : NOV27.M  
 Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 Last Update : Mon Nov 27 15:31:54 2023  
 Response Via : Initial Calibration

## Calibration Files

0.5 =00601006.D 5 =00801008.D 10 =00901009.D 30 =01201012.D 20 =01101011.D 2 =00

Compound	0.5	5	10	30	20	2	15	Avg	%RSD
1) I Fluorobenzene	-----ISTD-----								
2) S 1,2-Dichloroet...	0.357	0.353	0.345	0.337	0.338	0.349	0.344	0.346	2.14
3) Dichlorodifluo...	0.266	0.250	0.319	0.270	0.295	0.235	0.286	0.274	10.26
4) Chloromethane	0.456	0.447	0.457	0.407	0.448	0.420	0.444	0.440	4.35
5) Vinyl chloride	0.483	0.484	0.555	0.462	0.514	0.460	0.524	0.497	7.02
6) Bromomethane	0.200	0.177	0.178	0.114	0.132	0.172	0.164	0.162	18.28
7) Chloroethane	0.282	0.277	0.292	0.214	0.248	0.260	0.278	0.264	9.98
8) Trichlorofluor...	0.522	0.482	0.596	0.509	0.555	0.470	0.552	0.526	8.41
9) Diethyl ether	0.542	0.557	0.573	0.497	0.556	0.512	0.568	0.543	5.30
10) 1,1-Dichloroet...	0.686	0.679	0.780	0.694	0.744	0.643	0.751	0.711	6.77
11) Acetone		0.189	0.172	0.134	0.159	0.296	0.183	0.189	29.68
12) Methyl iodide	0.259	0.293	0.323	0.283	0.311	0.251	0.330	0.293	10.43
13) Carbon disulfide	1.273	1.291	1.427	1.206	1.302	1.226	1.361	1.298	5.87
14) Methylene chlo...	0.597	0.452	0.443	0.369	0.409	0.426	0.431	0.447	16.03
15) MTBE (2-methox...	2.073	1.874	1.914	1.657	1.864	1.750	1.891	1.860	7.03
16) trans-1,2-Dich...	0.754	0.797	0.844	0.750	0.819	0.753	0.837	0.793	5.21
17) Acrylonitrile		0.158	0.196	0.194	0.215	0.145	0.218	0.188	16.00
18) 1,1-Dichloroet...	1.022	1.044	1.066	0.949	1.039	0.957	1.054	1.019	4.62
19) Methyl ethyl k...	0.281	0.260	0.320	0.324	0.343	0.294	0.350	0.310	10.66
20) 2,2-Dichloropr...		0.681	0.761	0.675	0.738	0.629	0.753	0.706	7.41
21) cis-1,2-Dichlo...	0.441	0.506	0.518	0.466	0.510	0.454	0.518	0.488	6.74
22) Bromochloromet...	0.261	0.274	0.283	0.235	0.273	0.249	0.283	0.265	6.79
23) Chloroform	0.859	0.873	0.884	0.774	0.849	0.813	0.876	0.847	4.69
24) S Dibromofluorom...	0.264	0.273	0.269	0.270	0.268	0.268	0.270	0.269	0.94
25) 1,1,1-Trichlor...	0.650	0.653	0.722	0.633	0.694	0.614	0.701	0.667	5.89
26) 1,1-Dichloropr...	0.725	0.728	0.815	0.707	0.778	0.645	0.790	0.741	7.78
27) Carbon tetrach...	0.424	0.462	0.546	0.486	0.530	0.423	0.529	0.486	10.53
28) Benzene	2.269	2.368	2.430	2.126	2.332	2.193	2.394	2.302	4.82
29) 1,2-Dichloroet...	0.816	0.816	0.808	0.702	0.777	0.744	0.801	0.780	5.54
30) Trichloroethene	0.465	0.460	0.479	0.421	0.463	0.436	0.472	0.457	4.54
31) 1,2-Dichloropr...	0.635	0.670	0.669	0.580	0.649	0.609	0.655	0.638	5.20
32) S Toluene-d8	1.303	1.332	1.322	1.322	1.319	1.304	1.334	1.319	0.92
33) Dibromomethane	0.267	0.258	0.262	0.231	0.256	0.233	0.261	0.252	5.71
34) Bromodichlorom...	0.595	0.643	0.654	0.570	0.638	0.582	0.653	0.619	5.75
35) cis-1,3-Dichlo...	0.780	0.872	0.926	0.828	0.918	0.766	0.934	0.860	8.18
36) Methyl isobuty...		0.758	0.827	0.753	0.814	0.602	0.852	0.768	11.74
37) Toluene	1.945	2.079	2.148	1.897	2.081	1.928	2.137	2.031	5.15
38) I Chlorobenzene-d5	-----ISTD-----								
39) trans-1,3-Dich...	0.409	0.486	0.524	0.491	0.536	0.411	0.534	0.484	11.29
40) 1,1,2-Trichlor...	0.303	0.296	0.299	0.265	0.297	0.273	0.301	0.291	5.27
41) Tetrachloroethene	0.269	0.255	0.279	0.245	0.265	0.250	0.268	0.262	4.59
42) 2-Hexanone		0.290	0.333	0.314	0.337	0.222	0.353	0.308	15.42
43) 1,3-Dichloropr...	0.554	0.592	0.602	0.534	0.599	0.552	0.598	0.576	4.88
44) Dibromochlorom...	0.238	0.245	0.256	0.229	0.256	0.217	0.256	0.242	6.34
45) 1,2-Dibromoethane	0.249	0.271	0.278	0.248	0.275	0.240	0.279	0.263	6.30
46) Chlorobenzene	0.683	0.692	0.709	0.626	0.690	0.644	0.701	0.678	4.55
47) 1,1,1,2-Tetrac...	0.208	0.222	0.228	0.206	0.228	0.204	0.231	0.218	5.41
48) Ethylbenzene	1.048	1.214	1.278	1.165	1.268	1.095	1.286	1.194	7.90
49) m+p-Xylene	0.735	0.881	0.937	0.845	0.925	0.785	0.937	0.864	9.21
50) o-Xylene	0.706	0.846	0.900	0.820	0.897	0.744	0.916	0.833	9.80
51) Styrene	0.455	0.581	0.675	0.567	0.674	0.448	0.656	0.579	16.79
52) Bromoform	0.107	0.114	0.121	0.112	0.122	0.103	0.124	0.115	6.95
53) Isopropylbenzene	0.701	0.812	0.912	0.823	0.903	0.707	0.904	0.823	11.02

54)	S	Bromofluoroben...	0.582	0.586	0.585	0.580	0.585	0.586	0.587	0.584	0.41
55)		Bromobenzene	0.190	0.190	0.199	0.179	0.196	0.177	0.199	0.190	4.75
56)		n-Propylbenzene	0.852	0.980	1.083	0.963	1.062	0.858	1.066	0.981	9.90
57)		1,3,5-Trimethy...	0.461	0.560	0.607	0.541	0.598	0.480	0.607	0.551	10.98
58)		2-Chlorotoluene	0.530	0.584	0.613	0.543	0.599	0.518	0.617	0.572	7.20
59)		4-Chlorotoluene	0.536	0.659	0.693	0.000	0.682	0.585	0.689	0.549	45.37
60)		tert-Butylbenzene	0.267	0.296	0.338	0.307	0.336	0.269	0.336	0.307	10.14
61)		1,1,2,2-Tetrac...	0.305	0.302	0.307	0.267	0.296	0.278	0.307	0.295	5.38
62)		trans-1,4-Dich...		0.095	0.101	0.096	0.106	0.075	0.106	0.097#	12.24
63)		1,2,3-Trichlor...	0.089	0.087	0.090	0.077	0.086	0.081	0.090	0.086#	5.92
64)		1,2,4-Trimethy...	0.420	0.538	0.578	0.524	0.579	0.449	0.589	0.525	12.69
65)		sec-Butylbenzene	0.523	0.606	0.714	0.632	0.700	0.532	0.692	0.628	12.54
66)		4-Isopropyltol...	0.436	0.479	0.540	0.484	0.535	0.425	0.530	0.490	9.68
67)	I	1,4-Dichlorobenzen...	-----ISTD-----								
68)	S	1,2-Dichlorobe...	0.867	0.849	0.847	0.846	0.851	0.857	0.854	0.853	0.87
69)		1,3-Dichlorobe...	0.559	0.608	0.631	0.563	0.622	0.551	0.629	0.595	5.99
70)		1,4-Dichlorobe...	0.635	0.631	0.651	0.573	0.640	0.620	0.649	0.629	4.23
71)		1,2-Dichlorobe...	0.568	0.558	0.577	0.506	0.565	0.536	0.569	0.554	4.47
72)		n-butylbenzene	0.809	0.907	1.048	0.929	1.033	0.797	1.009	0.933	11.05
73)		1,2-Dibromo-3-...	0.067	0.064	0.068	0.065	0.068	0.056	0.069	0.065#	6.88
74)		1,2,4-Trichlor...	0.208	0.262	0.247	0.236	0.258	0.221	0.245	0.239	8.20
75)		Hexachlorobuta...	0.098	0.095	0.105	0.088	0.099	0.095	0.093	0.096#	5.63
76)		Naphthalene	0.561	0.850	0.762	0.788	0.840	0.547	0.813	0.737	17.48
77)		1,2,3-Trichlor...	0.200	0.231	0.233	0.219	0.241	0.196	0.229	0.221	7.78

(#) = Out of Range

Data Path : T:\Data2\Voc\HP5975\2023 DATA\NOV\30\  
 Data File : 00201002.D  
 Acq On : 30 Nov 2023 9:35 am  
 Operator : BKP  
 Sample : BLANK  
 Misc :  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 30 10:29:44 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\NOV27.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Nov 27 15:31:54 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	7.652	96	1303632	20.00	ppb	0.00
38) Chlorobenzene-d5	12.461	117	2101942	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.525	152	912375	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.159	65	481518	21.34	ppb	0.00
Spiked Amount	20.000	Range 85 - 115	Recovery	=	106.70%	
24) Dibromofluoromethane	6.664	111	360170	20.54	ppb	0.00
Spiked Amount	20.000		Recovery	=	102.70%	
32) Toluene-d8	10.108	98	1739202	20.22	ppb	0.00
Spiked Amount	20.000		Recovery	=	101.10%	
54) Bromofluorobenzene	14.491	95	1216020	19.80	ppb	0.00
Spiked Amount	20.000		Recovery	=	99.00%	
68) 1,2-Dichlorobenzene-d4	17.190	152	796217	20.46	ppb	0.00
Spiked Amount	20.000		Recovery	=	102.30%	
Target Compounds						
11) Acetone	3.373	43	21023	Below Cal		Qvalue 90

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\NOV\30\  
 Data File : 00301003.D  
 Acq On : 30 Nov 2023 10:04 am  
 Operator : BKP  
 Sample : 10 PPB VOC CCV  
 Misc :  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 30 10:28:56 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\NOV27.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Nov 27 15:31:54 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev (Min)	
Internal Standards							
1) Fluorobenzene	7.651	96	1374920	20.00	ppb	0.00	
38) Chlorobenzene-d5	12.459	117	2203837	20.00	ppb	0.00	
67) 1,4-Dichlorobenzene-d4	16.523	152	984912	20.00	ppb	0.00	
System Monitoring Compounds							
2) 1,2-Dichloroethane-d4	7.154	65	487748	20.50	ppb	0.00	
Spiked Amount 20.000	Range 85 - 115		Recovery	=	102.50%		
24) Dibromofluoromethane	6.662	111	378658	20.48	ppb	0.00	
Spiked Amount 20.000			Recovery	=	102.40%		
32) Toluene-d8	10.106	98	1868413	20.60	ppb	0.00	
Spiked Amount 20.000			Recovery	=	103.00%		
54) Bromofluorobenzene	14.490	95	1294648	20.10	ppb	0.00	
Spiked Amount 20.000			Recovery	=	100.50%		
68) 1,2-Dichlorobenzene-d4	17.189	152	835167	19.88	ppb	0.00	
Spiked Amount 20.000			Recovery	=	99.40%		
Target Compounds							
3) Dichlorodifluoromethane	1.053	85	188265	9.39	ppb		Qvalue 100
4) Chloromethane	1.261	50	288628	9.70	ppb		99
5) Vinyl chloride	1.410	62	343482	10.05	ppb		98
6) Bromomethane	1.870	96	113298	9.65	ppb		97
7) Chloroethane	2.025	64	182839	9.33	ppb		94
8) Trichlorofluoromethane	2.392	101	385907	10.66	ppb		96
9) Diethyl ether	2.864	59	370120	9.91	ppb		88
10) 1,1-Dichloroethene	3.178	61	504487	10.32	ppb		89
11) Acetone	3.345	43	123284	10.68	ppb		82
12) Methyl iodide	3.401	142	215805	10.00	ppb		91
13) Carbon disulfide	3.477	76	925513	10.37	ppb		100
14) Methylene chloride	3.974	84	282224	9.19	ppb		94
15) MTBE (2-methoxy-2-meth...	4.402	73	1227155	9.60	ppb		90
16) trans-1,2-Dichloroethene	4.380	61	551539	10.11	ppb	#	76
17) Acrylonitrile	4.462	53	127843	9.90	ppb		100
18) 1,1-Dichloroethane	5.030	63	693134	9.90	ppb		96
19) Methyl ethyl ketone	6.024	43	197664	8.99	ppb		87
20) 2,2-Dichloropropane	5.893	77	496946	10.24	ppb		98
21) cis-1,2-Dichloroethene	5.925	96	338316	10.09	ppb		97
22) Bromochloromethane	6.280	130	183598	10.06	ppb		99
23) Chloroform	6.417	83	577179	9.91	ppb		95
25) 1,1,1-Trichloroethane	6.644	97	467835	10.21	ppb		80
26) 1,1-Dichloropropene	6.898	75	527804	10.36	ppb		75
27) Carbon tetrachloride	6.881	117	354536	10.62	ppb		99
28) Benzene	7.209	78	1564946	9.89	ppb		99
29) 1,2-Dichloroethane	7.271	62	536284	10.00	ppb		96
30) Trichloroethene	8.204	130	310661	9.90	ppb	#	83
31) 1,2-Dichloropropane	8.555	63	436457	9.95	ppb		97
33) Dibromomethane	8.747	174	169679	9.78	ppb	#	33
34) Bromodichloromethane	9.002	83	434452	10.20	ppb		94
35) cis-1,3-Dichloropropene	9.711	75	607628	9.55	ppb		78
36) Methyl isobutyl ketone	9.996	43	518195	9.31	ppb		91

37)	Toluene	10.211	91	1395439	10.00	ppb	98
39)	trans-1,3-Dichloropropene	10.621	75	519489	9.15	ppb	79
40)	1,1,2-Trichloroethane	10.899	97	301018	9.40	ppb	87
41)	Tetrachloroethene	11.072	166	272123	9.44	ppb	91
42)	2-Hexanone	11.370	43	319379	8.92	ppb	87
43)	1,3-Dichloropropane	11.164	76	600947	9.47	ppb	99
44)	Dibromochloromethane	11.519	129	256209	9.59	ppb	98
45)	1,2-Dibromoethane	11.688	107	273851	9.46	ppb	98
46)	Chlorobenzene	12.505	112	698717m	9.35	ppb	
47)	1,1,1,2-Tetrachloroethane	12.660	131	228050	9.49	ppb	97
48)	Ethylbenzene	12.711	91	1268129	9.64	ppb	90
49)	m+p-Xylene	12.914	91	1856241	19.51	ppb	87
50)	o-Xylene	13.584	91	876824	9.56	ppb	88
51)	Styrene	13.620	104	663243	9.13	ppb	77
52)	Bromoform	13.919	173	123531	9.53	ppb	100
53)	Isopropylbenzene	14.235	105	883600	9.74	ppb	96
55)	Bromobenzene	14.726	156	193338	9.24	ppb #	41
56)	n-Propylbenzene	14.955	91	1049195	9.71	ppb #	86
57)	1,3,5-Trimethylbenzene	15.282	105	589986	9.72	ppb	95
58)	2-Chlorotoluene	15.077	91	603431	9.58	ppb #	78
59)	4-Chlorotoluene	15.279	91	682419m	11.27	ppb	
60)	tert-Butylbenzene	15.844	91	328945	9.72	ppb #	70
61)	1,1,2,2-Tetrachloroethane	14.803	83	299172	9.22	ppb	87
62)	trans-1,4-Dichloro-2-b...	14.919	53	102998	9.23	ppb	95
63)	1,2,3-Trichloropropane	14.854	110	86480	9.16	ppb	93
64)	1,2,4-Trimethylbenzene	15.936	105	566063	9.78	ppb	91
65)	sec-Butylbenzene	16.236	105	675515	9.75	ppb #	91
66)	4-Isopropyltoluene	16.515	119	518158	9.60	ppb #	92
69)	1,3-Dichlorobenzene	16.401	146	278935	9.52	ppb	96
70)	1,4-Dichlorobenzene	16.564	146	288658	9.32	ppb	95
71)	1,2-Dichlorobenzene	17.221	146	250352	9.18	ppb	89
72)	n-butylbenzene	17.250	91	453876	9.88	ppb #	89
73)	1,2-Dibromo-3-chloropr...	18.655	157	28936	8.74	ppb	100
74)	1,2,4-Trichlorobenzene	20.140	180	106569	9.04	ppb	89
75)	Hexachlorobutadiene	20.472	225	47049	9.93	ppb	96
76)	Naphthalene	20.578	128	322659	8.27	ppb	87
77)	1,2,3-Trichlorobenzene	21.019	180	99266	9.11	ppb	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

NOV27.M Thu Nov 30 10:29:11 2023

Data Path : T:\Data2\Voc\HP5975\2023 DATA\NOV\30\  
 Data File : 00301003.D  
 Acq On : 30 Nov 2023 10:04 am  
 Operator : BKP  
 Sample : 10 PPB VOC CCV  
 Misc :  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 04 13:20:39 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\NOV27nglist.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Thu Nov 30 09:23:43 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev (Min)	
<b>Internal Standards</b>							
1) Fluorobenzene	7.648	96	1374087	20.00	ppb	0.00	
46) Chlorobenzene-d5	12.455	117	2203837	20.00	ppb	0.00	
78) 1,4 Dichlorobenzene-d4	16.521	152	984912	20.00	ppb	0.00	
<b>System Monitoring Compounds</b>							
2) 1,2-Dichloroethane-d4	7.148	65	487748	20.50	ppb	0.00	
Spiked Amount	20.000	Range 85 - 115	Recovery	=	102.50%		
25) Dibromofluoromethane	6.654	111	378658	20.48	ppb	0.00	
Spiked Amount	20.000		Recovery	=	102.40%		
38) Toluene-d8	10.102	98	1868413	20.61	ppb	0.00	
Spiked Amount	20.000		Recovery	=	103.05%		
63) Bromofluorobenzene	14.488	95	1294648	16.08	ppb	0.00	
Spiked Amount	20.000		Recovery	=	80.40%		
79) 1,2-Dichlorobenzene-d4	17.190	150	1341924	19.80	ppb	0.00	
Spiked Amount	20.000		Recovery	=	99.00%		
<b>Target Compounds</b>							
3) Dichlorodifluoromethane	1.053	85	188265	9.99	ppb		Qvalue 100
4) Chloromethane	1.261	52	93130	9.20	ppb		98
5) Vinyl chloride	1.410	62	346965	10.19	ppb		98
6) Bromomethane	1.870	94	124080	9.86	ppb		97
7) Chloroethane	2.025	64	182839	10.06	ppb		97
8) Trichlorofluoromethane	2.392	101	384584	10.64	ppb		98
9) Diethyl ether	2.859	59	370120	9.91	ppb		97
10) 1,1-Dichloroethene	3.178	61	502988	10.32	ppb		88
11) Acetone	4.395	43	276759m	9.98	ppb		
12) Methyl iodide	3.401	142	214474m	10.69	ppb		
13) Carbon disulfide	3.477	76	922413	10.34	ppb		100
14) Allyl Chloride	3.762	41	742345	10.04	ppb	#	89
15) Methylene chloride	3.964	84	282224	9.16	ppb		98
16) MTBE (2-methoxy-2-meth...	4.395	73	1227155	9.60	ppb		95
17) trans-1,2-Dichloroethene	4.374	61	551539	10.12	ppb		85
18) Acrylonitrile	4.416	53	118182	10.23	ppb		82
19) 1,1-Dichloroethane	5.028	63	693134	9.90	ppb		96
20) Methyl ethyl ketone	6.008	43	186944	9.39	ppb		87
21) 2,2-Dichloropropane	5.890	77	496946	10.31	ppb	#	82
22) cis-1,2-Dichloroethene	5.911	61	627342	10.03	ppb		81
23) Bromochloromethane	6.272	130	183598	10.07	ppb		97
24) Chloroform	6.418	83	577179	9.91	ppb		99
26) Methyl Acrylate	6.140	55	458633	9.98	ppb	#	94
27) Tetrahydrofuran	6.362	42	356582	18.67	ppb	#	87
28) 1,1,1-Trichloroethane	6.640	97	467835	10.21	ppb		83
29) 1,1-Dichloropropene	6.898	75	527804	10.38	ppb		98
30) 1-Chlorobutane	6.821	56	899835	10.29	ppb		92
31) Carbon tetrachloride	6.877	117	354536	10.62	ppb		98
32) Benzene	7.204	78	1564946	9.48	ppb		98
33) Propionitrile	6.126	54	39117	8.17	ppb		100
34) Methacrylonitrile	6.307	67	210125	10.10	ppb		94
35) 1,2-Dichloroethane	7.266	62	536284	10.00	ppb		97

36)	Trichloroethene	8.198	95	335179	9.94	ppb	91
37)	1,2-Dichloropropane	8.552	63	436457	9.95	ppb	94
39)	Dibromomethane	8.740	174	169679	9.79	ppb	98
40)	Bromodichloromethane	8.997	83	434036	10.20	ppb	98
41)	Methyl Methacrylate	8.796	69	313925	8.25	ppb	94
42)	cis-1,3-Dichloropropene	9.706	75	607628	10.29	ppb	95
43)	Methyl isobutyl ketone	9.991	58	185261	9.72	ppb	99
44)	2-Nitropropane	9.393	43	145759	10.43	ppb	99
45)	Toluene	10.207	91	1394589	9.99	ppb	100
47)	trans-1,3-Dichloropropene	10.610	75	518801	7.79	ppb	93
48)	1,1,2-Trichloroethane	10.895	97	301018	7.52	ppb	95
49)	Tetrachloroethene	11.069	166	272123	7.55	ppb	92
50)	2-Hexanone	11.354	43	317500	6.68	ppb	99
51)	1,3-Dichloropropane	11.159	76	600517	7.57	ppb	97
52)	Ethyl Methacrylate	10.791	69	513586	8.49	ppb	97
53)	Dibromochloromethane	11.514	129	256209	7.67	ppb	95
54)	1,2-Dibromoethane	11.681	107	273695	7.56	ppb	100
55)	Chlorobenzene	12.500	112	697470	7.47	ppb	95
56)	1,1,1,2-Tetrachloroethane	12.659	131	228050	7.60	ppb	97
57)	Ethylbenzene	12.708	91	1268129	7.71	ppb	98
58)	m+p-Xylene	12.912	91	1856241	15.61	ppb	97
59)	o-Xylene	13.585	91	877412	7.64	ppb	97
60)	Styrene	13.616	104	663243	6.98	ppb	97
61)	Bromoform	13.915	173	123531	7.82	ppb	94
62)	Isopropylbenzene	14.231	105	883600	7.79	ppb	98
64)	Bromobenzene	14.728	156	193338	7.39	ppb	96
65)	n-Propylbenzene	14.958	91	1049195	6.93	ppb	96
66)	1,3,5-Trimethylbenzene	15.283	105	589986	7.78	ppb	97
67)	2-Chlorotoluene	15.076	91	603027	7.67	ppb	96
68)	4-Chlorotoluene	15.279	91	676363	7.71	ppb	92
69)	tert-Butylbenzene	15.844	91	330100	7.02	ppb	97
70)	1,1,2,2-Tetrachloroethane	14.800	83	299172	7.37	ppb	99
71)	trans-1,4-Dichloro-2-b...	14.913	53	102998	6.98	ppb #	63
72)	1,2,3-Trichloropropane	14.854	110	86480	7.37	ppb	98
73)	Pentachloroethane	15.857	117	119265	7.01	ppb #	1
74)	1,2,4-Trimethylbenzene	15.934	105	566063	7.83	ppb	97
75)	sec-Butylbenzene	16.237	105	675515	7.80	ppb	99
76)	4-Isopropyltoluene	15.848	119	549441	6.96	ppb #	58
77)	Hexachloroethane	17.651	119	60944	7.19	ppb #	76
80)	1,3-Dichlorobenzene	16.399	146	278935	9.52	ppb	99
81)	1,4-Dichlorobenzene	16.562	146	288658	9.32	ppb	97
82)	1,2-Dichlorobenzene	17.221	146	250352	9.18	ppb	95
83)	n-butylbenzene	17.249	91	460062	8.83	ppb	98
84)	1,2-Dibromo-3-chloropr...	18.649	75	33466	8.87	ppb	90
85)	1,2,4-Trichlorobenzene	20.140	180	106377	9.02	ppb	92
86)	Hexachlorobutadiene	20.470	225	47049	10.05	ppb	96
87)	Naphthalene	20.578	128	322659	7.98	ppb	98
88)	1,2,3-Trichlorobenzene	21.016	180	99266	9.11	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\NOV\30\  
 Data File : 00501005.D  
 Acq On : 30 Nov 2023 11:02 am  
 Operator : BKP  
 Sample : MDK0709-07  
 Misc :  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 30 13:16:40 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\NOV27.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Nov 27 15:31:54 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) Fluorobenzene	7.653	96	1355632	20.00	ppb	0.00
38) Chlorobenzene-d5	12.460	117	2206108	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.523	152	968697	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.161	65	496760	21.17	ppb	0.01
Spiked Amount 20.000	Range 85 - 115		Recovery	= 105.85%		
24) Dibromofluoromethane	6.668	111	380095	20.85	ppb	0.01
Spiked Amount 20.000			Recovery	= 104.25%		
32) Toluene-d8	10.108	98	1816214	20.31	ppb	0.00
Spiked Amount 20.000			Recovery	= 101.55%		
54) Bromofluorobenzene	14.490	95	1280246	19.86	ppb	0.00
Spiked Amount 20.000			Recovery	= 99.30%		
68) 1,2-Dichlorobenzene-d4	17.189	152	837358	20.27	ppb	0.00
Spiked Amount 20.000			Recovery	= 101.35%		

Target Compounds Qvalue

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(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\NOV\30\  
 Data File : 00601006.D  
 Acq On : 30 Nov 2023 11:31 am  
 Operator : BKP  
 Sample : MDK0709-01  
 Misc :  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Nov 30 13:16:57 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\NOV27.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Nov 27 15:31:54 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	7.651	96	1276524	20.00	ppb	0.00
38) Chlorobenzene-d5	12.459	117	2105021	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.524	152	928986	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.157	65	476154	21.55	ppb	0.00
Spiked Amount 20.000	Range 85 - 115		Recovery	= 107.75%		
24) Dibromofluoromethane	6.664	111	366807	21.37	ppb	0.00
Spiked Amount 20.000			Recovery	= 106.85%		
32) Toluene-d8	10.107	98	1716887	20.39	ppb	0.00
Spiked Amount 20.000			Recovery	= 101.95%		
54) Bromofluorobenzene	14.490	95	1217371	19.79	ppb	0.00
Spiked Amount 20.000			Recovery	= 98.95%		
68) 1,2-Dichlorobenzene-d4	17.189	152	802398	20.25	ppb	0.00
Spiked Amount 20.000			Recovery	= 101.25%		
Target Compounds						
11) Acetone	3.373	43	12655	Below Cal		Qvalue 98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\NOV\30\  
 Data File : 00701007.D  
 Acq On : 30 Nov 2023 12:00 pm  
 Operator : BKP  
 Sample : MDK0709-02  
 Misc :  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 30 13:17:15 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\NOV27.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Nov 27 15:31:54 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) Fluorobenzene	7.651	96	1298724	20.00	ppb	0.00
38) Chlorobenzene-d5	12.460	117	2203221	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.524	152	973835	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.158	65	482931	21.49	ppb	0.00
Spiked Amount	20.000	Range 85 - 115	Recovery	=	107.45%	
24) Dibromofluoromethane	6.664	111	374977	21.47	ppb	0.00
Spiked Amount	20.000		Recovery	=	107.35%	
32) Toluene-d8	10.107	98	1780704	20.78	ppb	0.00
Spiked Amount	20.000		Recovery	=	103.90%	
54) Bromofluorobenzene	14.490	95	1280786	19.89	ppb	0.00
Spiked Amount	20.000		Recovery	=	99.45%	
68) 1,2-Dichlorobenzene-d4	17.189	152	850415	20.48	ppb	0.00
Spiked Amount	20.000		Recovery	=	102.40%	
Target Compounds						
11) Acetone	3.366	43	32697	1.29	ppb	86
14) Methylene chloride	3.979	84	15196	0.52	ppb	88
-----						

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\NOV\30\  
 Data File : 00801008.D  
 Acq On : 30 Nov 2023 12:29 pm  
 Operator : BKP  
 Sample : MDK0709-03  
 Misc :  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 30 13:17:39 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\NOV27.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Nov 27 15:31:54 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) Fluorobenzene	7.654	96	1291587	20.00	ppb	0.00
38) Chlorobenzene-d5	12.460	117	2210504	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.523	152	980481	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.161	65	482363	21.58	ppb	0.01
Spiked Amount 20.000	Range 85 - 115		Recovery =	107.90%		
24) Dibromofluoromethane	6.668	111	373327	21.49	ppb	0.01
Spiked Amount 20.000			Recovery =	107.45%		
32) Toluene-d8	10.108	98	1770518	20.78	ppb	0.00
Spiked Amount 20.000			Recovery =	103.90%		
54) Bromofluorobenzene	14.490	95	1276457	19.76	ppb	0.00
Spiked Amount 20.000			Recovery =	98.80%		
68) 1,2-Dichlorobenzene-d4	17.189	152	852658	20.39	ppb	0.00
Spiked Amount 20.000			Recovery =	101.95%		
Target Compounds						Qvalue
14) Methylene chloride	3.985	84	13299	0.46	ppb	94
-----						

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\NOV\30\  
 Data File : 00901009.D  
 Acq On : 30 Nov 2023 12:58 pm  
 Operator : BKP  
 Sample : MDK0709-04  
 Misc :  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 30 14:43:12 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\NOV27.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Nov 27 15:31:54 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
<b>Internal Standards</b>						
1) Fluorobenzene	7.654	96	1390148	20.00	ppb	0.00
38) Chlorobenzene-d5	12.460	117	2403646	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.525	152	1067641	20.00	ppb	0.00
<b>System Monitoring Compounds</b>						
2) 1,2-Dichloroethane-d4	7.162	65	518977	21.57	ppb	0.01
Spiked Amount 20.000	Range 85 - 115		Recovery =	107.85%		
24) Dibromofluoromethane	6.668	111	403571	21.59	ppb	0.01
Spiked Amount 20.000			Recovery =	107.95%		
32) Toluene-d8	10.108	98	1930120	21.05	ppb	0.00
Spiked Amount 20.000			Recovery =	105.25%		
54) Bromofluorobenzene	14.491	95	1410375	20.08	ppb	0.00
Spiked Amount 20.000			Recovery =	100.40%		
68) 1,2-Dichlorobenzene-d4	17.189	152	920937	20.22	ppb	0.00
Spiked Amount 20.000			Recovery =	101.10%		
<b>Target Compounds</b>						<b>Qvalue</b>
11) Acetone	3.408	43	37121m	1.51	ppb	
14) Methylene chloride	3.988	84	16686	0.54	ppb	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\NOV\30\  
 Data File : 01001010.D  
 Acq On : 30 Nov 2023 1:28 pm  
 Operator : BKP  
 Sample : MDK0709-05  
 Misc :  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 30 14:43:43 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\NOV27.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Nov 27 15:31:54 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) Fluorobenzene	7.652	96	1239333	20.00	ppb	0.00
38) Chlorobenzene-d5	12.460	117	2162360	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.524	152	955948	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.160	65	462409	21.56	ppb	0.01
Spiked Amount 20.000	Range 85 - 115		Recovery	= 107.80%		
24) Dibromofluoromethane	6.666	111	364337	21.86	ppb	0.00
Spiked Amount 20.000			Recovery	= 109.30%		
32) Toluene-d8	10.108	98	1730685	21.17	ppb	0.00
Spiked Amount 20.000			Recovery	= 105.85%		
54) Bromofluorobenzene	14.490	95	1251541	19.81	ppb	0.00
Spiked Amount 20.000			Recovery	= 99.05%		
68) 1,2-Dichlorobenzene-d4	17.190	152	828382m	20.32	ppb	0.00
Spiked Amount 20.000			Recovery	= 101.60%		
Target Compounds						
11) Acetone	3.366	43	32795	1.48	ppb	100
14) Methylene chloride	3.982	84	14717	0.53	ppb	83
-----						

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\NOV\30\  
 Data File : 01101011.D  
 Acq On : 30 Nov 2023 1:57 pm  
 Operator : BKP  
 Sample : MDK0709-06  
 Misc :  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Nov 30 14:44:12 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\NOV27.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Nov 27 15:31:54 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	7.654	96	1389476	20.00	ppb	0.00
38) Chlorobenzene-d5	12.460	117	2439938	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.525	152	1074557	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.161	65	519406	21.60	ppb	0.01
Spiked Amount	20.000	Range 85 - 115	Recovery	=	108.00%	
24) Dibromofluoromethane	6.668	111	413375	22.12	ppb	0.01
Spiked Amount	20.000		Recovery	=	110.60%	
32) Toluene-d8	10.108	98	1932328	21.08	ppb	0.00
Spiked Amount	20.000		Recovery	=	105.40%	
54) Bromofluorobenzene	14.491	95	1425317	19.99	ppb	0.00
Spiked Amount	20.000		Recovery	=	99.95%	
68) 1,2-Dichlorobenzene-d4	17.189	152	925663	20.20	ppb	0.00
Spiked Amount	20.000		Recovery	=	101.00%	
Target Compounds						
11) Acetone	3.415	43	32478m	1.03	ppb	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\NOV\30\  
 Data File : 01201012.D  
 Acq On : 30 Nov 2023 2:27 pm  
 Operator : BKP  
 Sample : MDK0709-08  
 Misc :  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Dec 04 12:13:17 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\NOV27.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Nov 27 15:31:54 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	7.651	96	1357492	20.00	ppb	0.00
38) Chlorobenzene-d5	12.460	117	2374449	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.524	152	1060430	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.159	65	504333	21.47	ppb	0.00
Spiked Amount	20.000	Range 85 - 115	Recovery	=	107.35%	
24) Dibromofluoromethane	6.665	111	394896	21.63	ppb	0.00
Spiked Amount	20.000		Recovery	=	108.15%	
32) Toluene-d8	10.107	98	1865332	20.83	ppb	0.00
Spiked Amount	20.000		Recovery	=	104.15%	
54) Bromofluorobenzene	14.489	95	1379939	19.89	ppb	0.00
Spiked Amount	20.000		Recovery	=	99.45%	
68) 1,2-Dichlorobenzene-d4	17.188	152	915993	20.25	ppb	0.00
Spiked Amount	20.000		Recovery	=	101.25%	
Target Compounds						
11) Acetone	3.380	43	10344	Below Cal		Qvalue 99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\NOV\30\  
 Data File : 01301013.D  
 Acq On : 30 Nov 2023 2:56 pm  
 Operator : BKP  
 Sample : MDK0709-09  
 Misc :  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Dec 04 12:13:29 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\NOV27.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Nov 27 15:31:54 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	7.653	96	1275311	20.00	ppb	0.00
38) Chlorobenzene-d5	12.460	117	2260781	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.524	152	1004080	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.161	65	485009	21.97	ppb	0.01
Spiked Amount 20.000	Range 85 - 115		Recovery	= 109.85%		
24) Dibromofluoromethane	6.668	111	381450	22.24	ppb	0.01
Spiked Amount 20.000			Recovery	= 111.20%		
32) Toluene-d8	10.108	98	1786250	21.23	ppb	0.00
Spiked Amount 20.000			Recovery	= 106.15%		
54) Bromofluorobenzene	14.490	95	1331573	20.16	ppb	0.00
Spiked Amount 20.000			Recovery	= 100.80%		
68) 1,2-Dichlorobenzene-d4	17.188	152	876275	20.46	ppb	0.00
Spiked Amount 20.000			Recovery	= 102.30%		

Target Compounds Qvalue

---

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\NOV\30\  
 Data File : 01401014.D  
 Acq On : 30 Nov 2023 3:25 pm  
 Operator : BKP  
 Sample : MDK0709-10  
 Misc :  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Dec 04 12:13:41 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\NOV27.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Nov 27 15:31:54 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	7.654	96	1366438	20.00	ppb	0.00
38) Chlorobenzene-d5	12.460	117	2428591	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.524	152	1085673	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.162	65	514089	21.74	ppb	0.01
Spiked Amount	20.000	Range 85 - 115	Recovery	=	108.70%	
24) Dibromofluoromethane	6.668	111	403775	21.97	ppb	0.01
Spiked Amount	20.000		Recovery	=	109.85%	
32) Toluene-d8	10.108	98	1922791	21.33	ppb	0.00
Spiked Amount	20.000		Recovery	=	106.65%	
54) Bromofluorobenzene	14.490	95	1424088	20.07	ppb	0.00
Spiked Amount	20.000		Recovery	=	100.35%	
68) 1,2-Dichlorobenzene-d4	17.189	152	941608	20.34	ppb	0.00
Spiked Amount	20.000		Recovery	=	101.70%	

Target Compounds Qvalue

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(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\NOV\30\  
 Data File : 01501015.D  
 Acq On : 30 Nov 2023 3:54 pm  
 Operator : BKP  
 Sample : MDK0709-11  
 Misc :  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: Dec 04 12:13:53 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\NOV27.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Nov 27 15:31:54 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) Fluorobenzene	7.650	96	1255635	20.00	ppb	0.00
38) Chlorobenzene-d5	12.459	117	2215103	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.523	152	981859	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.158	65	476341	21.92	ppb	0.00
Spiked Amount 20.000	Range 85 - 115		Recovery =	109.60%		
24) Dibromofluoromethane	6.663	111	373442	22.11	ppb	0.00
Spiked Amount 20.000			Recovery =	110.55%		
32) Toluene-d8	10.107	98	1745776	21.08	ppb	0.00
Spiked Amount 20.000			Recovery =	105.40%		
54) Bromofluorobenzene	14.490	95	1289286	19.92	ppb	0.00
Spiked Amount 20.000			Recovery =	99.60%		
68) 1,2-Dichlorobenzene-d4	17.188	152	855370	20.43	ppb	0.00
Spiked Amount 20.000			Recovery =	102.15%		
Target Compounds						
11) Acetone	3.408	43	10187	Below Cal		Qvalue 97
-----						

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\NOV\30\  
 Data File : 01601016.D  
 Acq On : 30 Nov 2023 4:23 pm  
 Operator : BKP  
 Sample : MDK0709-12  
 Misc :  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: Dec 04 12:14:07 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\NOV27.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Nov 27 15:31:54 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	7.652	96	1258510	20.00	ppb	0.00
38) Chlorobenzene-d5	12.460	117	2212009	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.524	152	979908	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.160	65	481393	22.10	ppb	0.01
Spiked Amount 20.000	Range	85 - 115	Recovery	=	110.50%	
24) Dibromofluoromethane	6.667	111	377565	22.31	ppb	0.00
Spiked Amount 20.000			Recovery	=	111.55%	
32) Toluene-d8	10.108	98	1752910	21.11	ppb	0.00
Spiked Amount 20.000			Recovery	=	105.55%	
54) Bromofluorobenzene	14.491	95	1302375	20.15	ppb	0.00
Spiked Amount 20.000			Recovery	=	100.75%	
68) 1,2-Dichlorobenzene-d4	17.189	152	865671	20.71	ppb	0.00
Spiked Amount 20.000			Recovery	=	103.55%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\NOV\30\  
 Data File : 01701017.D  
 Acq On : 30 Nov 2023 4:52 pm  
 Operator : BKP  
 Sample : MDK0709-13  
 Misc :  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: Dec 04 12:14:21 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\NOV27.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Nov 27 15:31:54 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	7.653	96	1260955	20.00	ppb	0.00
38) Chlorobenzene-d5	12.460	117	2219141	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.524	152	984883	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.159	65	474469	21.74	ppb	0.01
Spiked Amount 20.000	Range 85 - 115		Recovery	= 108.70%		
24) Dibromofluoromethane	6.667	111	376069	22.17	ppb	0.01
Spiked Amount 20.000			Recovery	= 110.85%		
32) Toluene-d8	10.108	98	1755046	21.10	ppb	0.00
Spiked Amount 20.000			Recovery	= 105.50%		
54) Bromofluorobenzene	14.491	95	1284777	19.81	ppb	0.00
Spiked Amount 20.000			Recovery	= 99.05%		
68) 1,2-Dichlorobenzene-d4	17.189	152	854628	20.35	ppb	0.00
Spiked Amount 20.000			Recovery	= 101.75%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\NOV\30\  
 Data File : 01801018.D  
 Acq On : 30 Nov 2023 5:21 pm  
 Operator : BKP  
 Sample : MDK0709-14  
 Misc :  
 ALS Vial : 18 Sample Multiplier: 1

Quant Time: Dec 04 12:14:42 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\NOV27.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Nov 27 15:31:54 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
<b>Internal Standards</b>						
1) Fluorobenzene	7.654	96	1234304	20.00	ppb	0.00
38) Chlorobenzene-d5	12.461	117	2160344	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.525	152	938310	20.00	ppb	0.00
<b>System Monitoring Compounds</b>						
2) 1,2-Dichloroethane-d4	7.162	65	473801	22.18	ppb	0.01
Spiked Amount 20.000	Range 85 - 115		Recovery	= 110.90%		
24) Dibromofluoromethane	6.668	111	371687	22.39	ppb	0.01
Spiked Amount 20.000			Recovery	= 111.95%		
32) Toluene-d8	10.109	98	1695608	20.82	ppb	0.00
Spiked Amount 20.000			Recovery	= 104.10%		
54) Bromofluorobenzene	14.492	95	1240316	19.65	ppb	0.00
Spiked Amount 20.000			Recovery	= 98.25%		
68) 1,2-Dichlorobenzene-d4	17.190	152	830708	20.76	ppb	0.00
Spiked Amount 20.000			Recovery	= 103.80%		
<b>Target Compounds</b>						<b>Qvalue</b>
19) Methyl ethyl ketone	5.992	43	12384	0.64	ppb	90

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\NOV\30\  
 Data File : 01901019.D  
 Acq On : 30 Nov 2023 5:50 pm  
 Operator : BKP  
 Sample : MDK0690-01  
 Misc :  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: Dec 04 12:16:17 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\NOV27.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Nov 27 15:31:54 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
-----							
Internal Standards							
1) Fluorobenzene	7.654	96	1258836	20.00	ppb	0.00	
38) Chlorobenzene-d5	12.461	117	2150830	20.00	ppb	0.00	
67) 1,4-Dichlorobenzene-d4	16.525	152	959760	20.00	ppb	0.00	
System Monitoring Compounds							
2) 1,2-Dichloroethane-d4	7.162	65	457968	21.02	ppb	0.01	
Spiked Amount	20.000	Range 85 - 115	Recovery	=	105.10%		
24) Dibromofluoromethane	6.667	111	358302	21.16	ppb	0.01	
Spiked Amount	20.000		Recovery	=	105.80%		
32) Toluene-d8	10.109	98	1731945	20.86	ppb	0.00	
Spiked Amount	20.000		Recovery	=	104.30%		
54) Bromofluorobenzene	14.491	95	1215816	19.34	ppb	0.00	
Spiked Amount	20.000		Recovery	=	96.70%		
68) 1,2-Dichlorobenzene-d4	17.190	152	823293	20.11	ppb	0.00	
Spiked Amount	20.000		Recovery	=	100.55%		
Target Compounds							
11) Acetone	3.359	43	612977m	68.55	ppb		Qvalue
19) Methyl ethyl ketone	6.017	43	549492	26.25	ppb	88	
37) Toluene	10.215	91	209610	1.64	ppb	98	
66) 4-Isopropyltoluene	16.516	119	103557	1.97	ppb	#	93
-----							

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\NOV\30\  
 Data File : 01901019.D  
 Acq On : 30 Nov 2023 5:50 pm  
 Operator : BKP  
 Sample : MDK0690-01  
 Misc :  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: Dec 04 13:18:28 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\NOV27nglist.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Thu Nov 30 09:23:40 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	7.648	96	1258836	20.00	ppb	0.00
46) Chlorobenzene-d5	12.460	117	2150830	20.00	ppb	0.00
78) 1,4 Dichlorobenzene-d4	16.521	152	959760	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.155	65	457431	20.99	ppb	0.01
Spiked Amount 20.000	Range 85 - 115		Recovery =	104.95%		
25) Dibromofluoromethane	6.661	111	358302	21.16	ppb	0.00
Spiked Amount 20.000			Recovery =	105.80%		
38) Toluene-d8	10.102	98	1731389	20.85	ppb	0.00
Spiked Amount 20.000			Recovery =	104.25%		
63) Bromofluorobenzene	14.488	95	1215816	15.48	ppb	0.00
Spiked Amount 20.000			Recovery =	77.40%		
79) 1,2-Dichlorobenzene-d4	17.190	150	1301340	19.70	ppb	0.00
Spiked Amount 20.000			Recovery =	98.50%		
Target Compounds						Qvalue
20) Methyl ethyl ketone	6.001	43	521959	28.61	ppb	89
45) Toluene	10.214	91	209610	1.64	ppb	100
60) Styrene	13.621	104	462	0.61	ppb	91

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\NOV\30\  
 Data File : 02001020.D  
 Acq On : 30 Nov 2023 6:19 pm  
 Operator : BKP  
 Sample : MDK0649-01  
 Misc : 1000X  
 ALS Vial : 20 Sample Multiplier: 1

Quant Time: Dec 04 12:17:46 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\NOV27.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Nov 27 15:31:54 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) Fluorobenzene	7.651	96	1304359	20.00	ppb	0.00
38) Chlorobenzene-d5	12.460	117	2303943	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.525	152	992658	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.158	65	499046	22.11	ppb	0.00
Spiked Amount	20.000					
	Range	85 - 115	Recovery	=	110.55%	
24) Dibromofluoromethane	6.664	111	382276	21.79	ppb	0.00
Spiked Amount	20.000					
			Recovery	=	108.95%	
32) Toluene-d8	10.108	98	1812136	21.06	ppb	0.00
Spiked Amount	20.000					
			Recovery	=	105.30%	
54) Bromofluorobenzene	14.491	95	1316263	19.55	ppb	0.00
Spiked Amount	20.000					
			Recovery	=	97.75%	
68) 1,2-Dichlorobenzene-d4	17.190	152	863889	20.41	ppb	0.00
Spiked Amount	20.000					
			Recovery	=	102.05%	
Target Compounds						
						Qvalue
11) Acetone	3.331	43	253192	25.90	ppb	82
41) Tetrachloroethene	11.073	166	1024960	34.01	ppb	90
-----						

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\NOV\30\  
 Data File : 02101021.D  
 Acq On : 30 Nov 2023 6:48 pm  
 Operator : BKP  
 Sample : MDK0649-02  
 Misc : 1000X  
 ALS Vial : 21 Sample Multiplier: 1

Quant Time: Dec 04 12:18:29 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\NOV27.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Nov 27 15:31:54 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev (Min)
-----						
Internal Standards						
1) Fluorobenzene	7.653	96	1253375	20.00	ppb	0.00
38) Chlorobenzene-d5	12.462	117	2150451	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.526	152	911629	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.159	65	503281	23.20	ppb	0.00
Spiked Amount	20.000	Range 85 - 115	Recovery	=	116.00%#	
24) Dibromofluoromethane	6.665	111	386545	22.93	ppb	0.00
Spiked Amount	20.000		Recovery	=	114.65%	
32) Toluene-d8	10.109	98	1705522	20.63	ppb	0.00
Spiked Amount	20.000		Recovery	=	103.15%	
54) Bromofluorobenzene	14.492	95	1211239	19.28	ppb	0.00
Spiked Amount	20.000		Recovery	=	96.40%	
68) 1,2-Dichlorobenzene-d4	17.191	152	810673	20.85	ppb	0.00
Spiked Amount	20.000		Recovery	=	104.25%	
Target Compounds						
41) Tetrachloroethene	11.090	166	40871179m	1452.80	ppb	Qvalue
-----						

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\NOV\30\  
 Data File : 02301023.D  
 Acq On : 30 Nov 2023 7:45 pm  
 Operator : BKP  
 Sample : MDK0709-07 MS  
 Misc :  
 ALS Vial : 23 Sample Multiplier: 1

Quant Time: Dec 04 12:20:48 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\NOV27.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Nov 27 15:31:54 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
<b>Internal Standards</b>							
1) Fluorobenzene	7.653	96	1355098	20.00	ppb	0.00	
38) Chlorobenzene-d5	12.461	117	2295180	20.00	ppb	0.00	
67) 1,4-Dichlorobenzene-d4	16.525	152	1023905	20.00	ppb	0.00	
<b>System Monitoring Compounds</b>							
2) 1,2-Dichloroethane-d4	7.156	65	494612	21.09	ppb	0.00	
Spiked Amount 20.000	Range 85 - 115		Recovery	= 105.45%			
24) Dibromofluoromethane	6.665	111	398294	21.85	ppb	0.00	
Spiked Amount 20.000			Recovery	= 109.25%			
32) Toluene-d8	10.108	98	1897214	21.22	ppb	0.00	
Spiked Amount 20.000			Recovery	= 106.10%			
54) Bromofluorobenzene	14.491	95	1332177	19.86	ppb	0.00	
Spiked Amount 20.000			Recovery	= 99.30%			
68) 1,2-Dichlorobenzene-d4	17.190	152	865263	19.81	ppb	0.00	
Spiked Amount 20.000			Recovery	= 99.05%			
<b>Target Compounds</b>							<b>Qvalue</b>
3) Dichlorodifluoromethane	1.053	85	208864	10.59	ppb		99
4) Chloromethane	1.264	50	308627	10.53	ppb		99
5) Vinyl chloride	1.413	62	390183	11.58	ppb		98
6) Bromomethane	1.880	96	138827	12.62	ppb		99
7) Chloroethane	2.032	64	227889	12.18	ppb		99
8) Trichlorofluoromethane	2.395	101	447268	12.54	ppb		95
9) Diethyl ether	2.863	59	442492	12.02	ppb		90
10) 1,1-Dichloroethene	3.178	61	578038	12.00	ppb		90
11) Acetone	3.366	43	137197m	12.37	ppb		
12) Methyl iodide	3.408	142	253786m	12.02	ppb		
13) Carbon disulfide	3.477	76	1124821	12.79	ppb		100
14) Methylene chloride	3.978	84	338831	11.20	ppb		94
15) MTBE (2-methoxy-2-meth...	4.402	73	1413147	11.21	ppb		90
16) trans-1,2-Dichloroethene	4.382	61	653646	12.16	ppb	#	75
17) Acrylonitrile	4.456	53	167560	13.17	ppb		94
18) 1,1-Dichloroethane	5.032	63	821080	11.89	ppb		97
19) Methyl ethyl ketone	6.025	43	251533	11.54	ppb		88
20) 2,2-Dichloropropane	5.895	77	579325	12.11	ppb		100
21) cis-1,2-Dichloroethene	5.925	96	399812	12.10	ppb		100
22) Bromochloromethane	6.281	130	216968	12.06	ppb		97
23) Chloroform	6.420	83	691595	12.05	ppb		96
25) 1,1,1-Trichloroethane	6.645	97	562019	12.44	ppb		84
26) 1,1-Dichloropropene	6.901	75	611539	12.18	ppb		75
27) Carbon tetrachloride	6.883	117	421673	12.81	ppb		99
28) Benzene	7.211	78	1850168	11.86	ppb		99
29) 1,2-Dichloroethane	7.272	62	635176	12.01	ppb		95
30) Trichloroethene	8.205	130	369749	11.95	ppb	#	82
31) 1,2-Dichloropropane	8.556	63	510152	11.80	ppb		97
33) Dibromomethane	8.748	174	205446	12.01	ppb	#	35
34) Bromodichloromethane	9.003	83	517116	12.32	ppb		93
35) cis-1,3-Dichloropropene	9.713	75	695084	11.13	ppb		76
36) Methyl isobutyl ketone	9.997	43	606823	11.10	ppb		91

37)	Toluene	10.212	91	1609920	11.70	ppb	100
39)	trans-1,3-Dichloropropene	10.623	75	602130	10.19	ppb	80
40)	1,1,2-Trichloroethane	10.901	97	356540	10.69	ppb	86
41)	Tetrachloroethene	11.074	166	378918	12.62	ppb	88
42)	2-Hexanone	11.370	43	382956	10.26	ppb	85
43)	1,3-Dichloropropane	11.165	76	705710	10.68	ppb	100
44)	Dibromochloromethane	11.521	129	289762	10.42	ppb	98
45)	1,2-Dibromoethane	11.689	107	325944	10.81	ppb	98
46)	Chlorobenzene	12.509	112	802252m	10.31	ppb	
47)	1,1,1,2-Tetrachloroethane	12.661	131	269373	10.77	ppb	98
48)	Ethylbenzene	12.712	91	1427719	10.42	ppb	90
49)	m+p-Xylene	12.916	91	2095558	21.15	ppb	87
50)	o-Xylene	13.586	91	993965	10.40	ppb	88
51)	Styrene	13.621	104	731286	9.68	ppb	78
52)	Bromoform	13.920	173	117390	8.69	ppb	96
53)	Isopropylbenzene	14.236	105	979039	10.36	ppb	95
55)	Bromobenzene	14.727	156	217930	10.00	ppb #	36
56)	n-Propylbenzene	14.957	91	1160353	10.31	ppb #	86
57)	1,3,5-Trimethylbenzene	15.283	105	642983	10.18	ppb	95
58)	2-Chlorotoluene	15.079	91	666304	10.15	ppb #	79
59)	4-Chlorotoluene	15.283	91	768839m	12.20	ppb	
60)	tert-Butylbenzene	15.845	91	352737	10.01	ppb #	68
61)	1,1,2,2-Tetrachloroethane	14.805	83	342519	10.13	ppb	90
62)	trans-1,4-Dichloro-2-b...	14.921	53	108530	9.34	ppb	97
63)	1,2,3-Trichloropropane	14.855	110	100869	10.26	ppb	93
64)	1,2,4-Trimethylbenzene	15.938	105	625378	10.38	ppb	91
65)	sec-Butylbenzene	16.238	105	725919	10.07	ppb #	90
66)	4-Isopropyltoluene	16.517	119	566392	10.08	ppb #	93
69)	1,3-Dichlorobenzene	16.402	146	307425	10.10	ppb	93
70)	1,4-Dichlorobenzene	16.566	146	316455	9.83	ppb	95
71)	1,2-Dichlorobenzene	17.223	146	279379	9.85	ppb	93
72)	n-butylbenzene	17.252	91	492932	10.32	ppb #	89
73)	1,2-Dibromo-3-chloropr...	18.657	157	32848	9.54	ppb	91
74)	1,2,4-Trichlorobenzene	20.142	180	115701	9.44	ppb	98
75)	Hexachlorobutadiene	20.474	225	51911	10.54	ppb	93
76)	Naphthalene	20.580	128	353816	8.71	ppb	87
77)	1,2,3-Trichlorobenzene	21.021	180	108172	9.55	ppb	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

NOV27.M Mon Dec 04 12:21:03 2023

Data Path : T:\Data2\Voc\HP5975\2023 DATA\NOV\30\  
 Data File : 02401024.D  
 Acq On : 30 Nov 2023 8:14 pm  
 Operator : BKP  
 Sample : MDK0709-07 MSD  
 Misc :  
 ALS Vial : 24 Sample Multiplier: 1

Quant Time: Dec 04 12:21:53 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\NOV27.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Nov 27 15:31:54 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
<b>Internal Standards</b>							
1) Fluorobenzene	7.654	96	1363330	20.00	ppb	0.00	
38) Chlorobenzene-d5	12.461	117	2303890	20.00	ppb	0.00	
67) 1,4-Dichlorobenzene-d4	16.525	152	1032331	20.00	ppb	0.00	
<b>System Monitoring Compounds</b>							
2) 1,2-Dichloroethane-d4	7.157	65	497304	21.08	ppb	0.00	
Spiked Amount 20.000	Range 85 - 115		Recovery	= 105.40%			
24) Dibromofluoromethane	6.665	111	398452	21.73	ppb	0.00	
Spiked Amount 20.000			Recovery	= 108.65%			
32) Toluene-d8	10.108	98	1910698	21.24	ppb	0.00	
Spiked Amount 20.000			Recovery	= 106.20%			
54) Bromofluorobenzene	14.491	95	1346685	20.00	ppb	0.00	
Spiked Amount 20.000			Recovery	= 100.00%			
68) 1,2-Dichlorobenzene-d4	17.191	152	876224	19.90	ppb	0.00	
Spiked Amount 20.000			Recovery	= 99.50%			
<b>Target Compounds</b>							<b>Qvalue</b>
3) Dichlorodifluoromethane	1.053	85	205561	10.35	ppb		98
4) Chloromethane	1.264	50	308007	10.44	ppb		99
5) Vinyl chloride	1.413	62	387076	11.42	ppb		98
6) Bromomethane	1.886	96	153016	14.23	ppb		92
7) Chloroethane	2.035	64	229061	12.17	ppb		100
8) Trichlorofluoromethane	2.398	101	434935	12.12	ppb		95
9) Diethyl ether	2.866	59	429691	11.60	ppb		89
10) 1,1-Dichloroethene	3.185	61	551410	11.38	ppb		91
11) Acetone	3.373	43	132264m	11.75	ppb		
12) Methyl iodide	3.408	142	263256m	12.41	ppb		
13) Carbon disulfide	3.477	76	1089658	12.31	ppb		100
14) Methylene chloride	3.980	84	336933	11.07	ppb		96
15) MTBE (2-methoxy-2-meth...	4.403	73	1422786	11.22	ppb		91
16) trans-1,2-Dichloroethene	4.384	61	632331	11.69	ppb	#	75
17) Acrylonitrile	4.459	53	158031	12.35	ppb		97
18) 1,1-Dichloroethane	5.034	63	799290	11.51	ppb		96
19) Methyl ethyl ketone	6.024	43	239795	10.95	ppb		91
20) 2,2-Dichloropropane	5.896	77	560905	11.65	ppb		99
21) cis-1,2-Dichloroethene	5.928	96	393626	11.84	ppb		98
22) Bromochloromethane	6.283	130	217998	12.05	ppb		98
23) Chloroform	6.420	83	679727	11.77	ppb		95
25) 1,1,1-Trichloroethane	6.646	97	545863	12.01	ppb		83
26) 1,1-Dichloropropene	6.901	75	593866	11.76	ppb		75
27) Carbon tetrachloride	6.884	117	408162	12.33	ppb		97
28) Benzene	7.212	78	1797858	11.46	ppb		98
29) 1,2-Dichloroethane	7.273	62	627247	11.79	ppb		96
30) Trichloroethene	8.207	130	360223	11.57	ppb	#	82
31) 1,2-Dichloropropane	8.556	63	497513	11.44	ppb		97
33) Dibromomethane	8.748	174	202803	11.79	ppb	#	33
34) Bromodichloromethane	9.004	83	508220	12.04	ppb		95
35) cis-1,3-Dichloropropene	9.713	75	692102	11.02	ppb		77
36) Methyl isobutyl ketone	9.997	43	601028	10.92	ppb		89

37)	Toluene	10.212	91	1577411	11.40	ppb	99
39)	trans-1,3-Dichloropropene	10.622	75	599055	10.10	ppb	81
40)	1,1,2-Trichloroethane	10.900	97	352398	10.52	ppb	89
41)	Tetrachloroethene	11.074	166	343751	11.41	ppb	89
42)	2-Hexanone	11.370	43	374032	9.99	ppb	85
43)	1,3-Dichloropropane	11.165	76	705184	10.63	ppb	100
44)	Dibromochloromethane	11.521	129	290410	10.40	ppb	100
45)	1,2-Dibromoethane	11.689	107	324144	10.71	ppb	96
46)	Chlorobenzene	12.507	112	783352	10.03	ppb #	78
47)	1,1,1,2-Tetrachloroethane	12.661	131	265006	10.55	ppb	98
48)	Ethylbenzene	12.712	91	1404197	10.21	ppb	90
49)	m+p-Xylene	12.916	91	2041148	20.52	ppb	87
50)	o-Xylene	13.586	91	976415	10.18	ppb	86
51)	Styrene	13.622	104	720564	9.50	ppb	80
52)	Bromoform	13.920	173	119349	8.81	ppb	98
53)	Isopropylbenzene	14.236	105	965453	10.18	ppb	97
55)	Bromobenzene	14.728	156	217712	9.95	ppb #	42
56)	n-Propylbenzene	14.957	91	1140254	10.09	ppb #	87
57)	1,3,5-Trimethylbenzene	15.284	105	633404	9.99	ppb	95
58)	2-Chlorotoluene	15.079	91	652933	9.91	ppb #	78
59)	4-Chlorotoluene	15.279	91	745172m	11.78	ppb	
60)	tert-Butylbenzene	15.845	91	348713	9.86	ppb #	70
61)	1,1,2,2-Tetrachloroethane	14.804	83	342965	10.11	ppb	88
62)	trans-1,4-Dichloro-2-b...	14.920	53	109203	9.36	ppb	90
63)	1,2,3-Trichloropropane	14.854	110	100773	10.21	ppb	86
64)	1,2,4-Trimethylbenzene	15.937	105	609624	10.08	ppb	95
65)	sec-Butylbenzene	16.239	105	725838	10.03	ppb #	90
66)	4-Isopropyltoluene	16.517	119	554888	9.84	ppb #	93
69)	1,3-Dichlorobenzene	16.403	146	307697	10.02	ppb	94
70)	1,4-Dichlorobenzene	16.566	146	314255	9.68	ppb	95
71)	1,2-Dichlorobenzene	17.224	146	276564	9.67	ppb	93
72)	n-butylbenzene	17.252	91	482848	10.03	ppb #	89
73)	1,2-Dibromo-3-chloropr...	18.656	157	32323	9.31	ppb	92
74)	1,2,4-Trichlorobenzene	20.142	180	119698	9.69	ppb	95
75)	Hexachlorobutadiene	20.474	225	51496	10.37	ppb	97
76)	Naphthalene	20.581	128	358283	8.75	ppb	90
77)	1,2,3-Trichlorobenzene	21.020	180	109468	9.59	ppb	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

NOV27.M Mon Dec 04 12:22:04 2023

Data Path : T:\Data2\Voc\HP5975\2023 DATA\NOV\30\  
 Data File : 02601026.D  
 Acq On : 30 Nov 2023 9:12 pm  
 Operator : BKP  
 Sample : 10 PPB VOC CCV 2  
 Misc :  
 ALS Vial : 26 Sample Multiplier: 1

Quant Time: Dec 04 12:22:40 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\NOV27.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Nov 27 15:31:54 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
-----							
Internal Standards							
1) Fluorobenzene	7.654	96	1315780	20.00	ppb	0.00	
38) Chlorobenzene-d5	12.461	117	2256092	20.00	ppb	0.00	
67) 1,4-Dichlorobenzene-d4	16.525	152	1012161	20.00	ppb	0.00	
System Monitoring Compounds							
2) 1,2-Dichloroethane-d4	7.158	65	484895	21.29	ppb	0.00	
Spiked Amount	20.000	Range 85 - 115	Recovery	=	106.45%		
24) Dibromofluoromethane	6.667	111	380668	21.51	ppb	0.00	
Spiked Amount	20.000		Recovery	=	107.55%		
32) Toluene-d8	10.108	98	1846128	21.27	ppb	0.00	
Spiked Amount	20.000		Recovery	=	106.35%		
54) Bromofluorobenzene	14.491	95	1325427	20.10	ppb	0.00	
Spiked Amount	20.000		Recovery	=	100.50%		
68) 1,2-Dichlorobenzene-d4	17.190	152	866596	20.07	ppb	0.00	
Spiked Amount	20.000		Recovery	=	100.35%		
Target Compounds							
							Qvalue
3) Dichlorodifluoromethane	1.057	85	180641	9.41	ppb		99
4) Chloromethane	1.267	50	263678	9.26	ppb		99
5) Vinyl chloride	1.420	62	326815	9.99	ppb		98
6) Bromomethane	1.880	96	111220	9.94	ppb		100
7) Chloroethane	2.032	64	177849	9.50	ppb		96
8) Trichlorofluoromethane	2.398	101	370250	10.69	ppb		96
9) Diethyl ether	2.869	59	377513	10.56	ppb		90
10) 1,1-Dichloroethene	3.185	61	481916	10.30	ppb		90
11) Acetone	3.373	43	129658m	11.98	ppb		
12) Methyl iodide	3.408	142	205019	9.93	ppb		93
13) Carbon disulfide	3.477	76	892262	10.45	ppb		100
14) Methylene chloride	3.982	84	276889	9.42	ppb		92
15) MTBE (2-methoxy-2-meth...	4.407	73	1217976	9.95	ppb		90
16) trans-1,2-Dichloroethene	4.386	61	536604	10.28	ppb	#	76
17) Acrylonitrile	4.466	53	132538	10.73	ppb		94
18) 1,1-Dichloroethane	5.035	63	673005	10.04	ppb		98
19) Methyl ethyl ketone	6.030	43	209900	9.95	ppb		87
20) 2,2-Dichloropropane	5.897	77	464696	10.00	ppb		99
21) cis-1,2-Dichloroethene	5.929	96	335239	10.45	ppb		99
22) Bromochloromethane	6.285	130	184534	10.57	ppb		96
23) Chloroform	6.421	83	568155	10.20	ppb		95
25) 1,1,1-Trichloroethane	6.647	97	461896	10.53	ppb		80
26) 1,1-Dichloropropene	6.902	75	509121	10.44	ppb		75
27) Carbon tetrachloride	6.884	117	343533	10.75	ppb		99
28) Benzene	7.213	78	1535813	10.14	ppb		99
29) 1,2-Dichloroethane	7.273	62	531532	10.35	ppb		97
30) Trichloroethene	8.207	130	305050	10.15	ppb	#	83
31) 1,2-Dichloropropane	8.558	63	426852	10.17	ppb		96
33) Dibromomethane	8.749	174	173496	10.45	ppb	#	32
34) Bromodichloromethane	9.004	83	431669	10.59	ppb		93
35) cis-1,3-Dichloropropene	9.714	75	583550	9.58	ppb		77
36) Methyl isobutyl ketone	9.998	43	511153	9.60	ppb		92

37) Toluene	10.213	91	1333996	9.99	ppb	99
39) trans-1,3-Dichloropropene	10.623	75	498957	8.58	ppb	80
40) 1,1,2-Trichloroethane	10.901	97	301996	9.21	ppb	87
41) Tetrachloroethene	11.074	166	283456	9.60	ppb	91
42) 2-Hexanone	11.372	43	311212	8.49	ppb	87
43) 1,3-Dichloropropane	11.165	76	597675	9.20	ppb	99
44) Dibromochloromethane	11.521	129	241505	8.83	ppb	95
45) 1,2-Dibromoethane	11.690	107	272986	9.21	ppb	95
46) Chlorobenzene	12.508	112	668227	8.74	ppb #	76
47) 1,1,1,2-Tetrachloroethane	12.661	131	222543	9.05	ppb	95
48) Ethylbenzene	12.712	91	1183640	8.79	ppb	91
49) m+p-Xylene	12.916	91	1729041	17.75	ppb	87
50) o-Xylene	13.586	91	825616	8.79	ppb	88
51) Styrene	13.622	104	625782	8.41	ppb	78
52) Bromoform	13.921	173	99119	7.47	ppb	95
53) Isopropylbenzene	14.236	105	810966	8.73	ppb	96
55) Bromobenzene	14.728	156	185246	8.65	ppb #	46
56) n-Propylbenzene	14.957	91	956889	8.65	ppb #	87
57) 1,3,5-Trimethylbenzene	15.284	105	538446	8.67	ppb	93
58) 2-Chlorotoluene	15.079	91	552877	8.57	ppb #	77
59) 4-Chlorotoluene	15.281	91	626885	10.12	ppb #	82
60) tert-Butylbenzene	15.845	91	297027	8.57	ppb #	71
61) 1,1,2,2-Tetrachloroethane	14.804	83	292658	8.81	ppb	93
62) trans-1,4-Dichloro-2-b...	14.923	53	93560	8.19	ppb	89
63) 1,2,3-Trichloropropane	14.855	110	85396	8.84	ppb	96
64) 1,2,4-Trimethylbenzene	15.937	105	514216	8.68	ppb	92
65) sec-Butylbenzene	16.238	105	607773	8.57	ppb #	90
66) 4-Isopropyltoluene	16.516	119	463765	8.40	ppb #	90
69) 1,3-Dichlorobenzene	16.403	146	258916	8.60	ppb	95
70) 1,4-Dichlorobenzene	16.566	146	266822	8.39	ppb	96
71) 1,2-Dichlorobenzene	17.223	146	238814	8.52	ppb	91
72) n-butylbenzene	17.252	91	398512	8.44	ppb #	88
73) 1,2-Dibromo-3-chloropr...	18.657	157	27782	8.16	ppb	98
74) 1,2,4-Trichlorobenzene	20.142	180	99272	8.19	ppb	99
75) Hexachlorobutadiene	20.474	225	42317	8.69	ppb	95
76) Naphthalene	20.580	128	304952	7.63	ppb	84
77) 1,2,3-Trichlorobenzene	21.021	180	93342	8.34	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

NOV27.M Mon Dec 04 12:22:54 2023

BDL0115

Starting sequence Mon Dec 04 09:50:13 2023

Instrument Name: MSD1

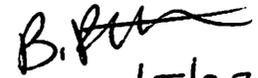
Sequence File: C:\msdchem\1\sequence\112723.S

Comment:

Operator: BKP

Data Path: C:\MSDCHEM\1\DATA\2023 DEC\04\

Method Path: C:\MSDCHEM\1\METHODS\

B.   
12/5/23

Line Type	Vial	DataFile	Method	Sample Name
1) Sample	1	00101001	8260PC30	RINSE
2) Sample	2	00201002	8260PC30	BLANK
3) Sample	3	00301003	8260PC30	0.5 PPB VOC ICAL
4) Sample	4	00401004	8260PC30	2 PPB VOC ICAL
5) Sample	5	00501005	8260PC30	5 PPB VOC ICAL
6) Sample	6	00601006	8260PC30	10 PPB VOC ICAL
7) Sample	7	00701007	8260PC30	15 PPB VOC ICAL
8) Sample	8	00801008	8260PC30	20 PPB VOC ICAL
9) Sample	9	00901009	8260PC30	30 PPB VOC ICAL
10) Sample	10	01001010	8260PC30	RINSE
11) Sample	11	01101011	8260PC30	10 PPB VOC ICV
12) Sample	12	01201012	8260PC30	2 PPB VOC CCV
13) Sample	13	01301013	8260PC30	RINSE
14) Sample	14	01401014	8260PC30	MDK0735-04
15) Sample	15	01501015	8260PC30	MDK0735-01
16) Sample	16	01601016	8260PC30	MDK0735-02
17) Sample	17	01701017	8260PC30	MDK0735-03
18) Sample	18	01801018	8260PC30	MDK0735-05
19) Sample	19	01901019	8260PC30	MDK0735-06
20) Sample	20	02001020	8260PC30	MDK0735-07
21) Sample	21	02101021	8260PC30	MDK0735-08
22) Sample	22	02201022	8260PC30	MDK0735-09
23) Sample	23	02301023	8260PC30	MDK0735-10
24) Sample	24	02401024	8260PC30	RINSE
25) Sample	25	02501025	8260PC30	MDK0735-04 MS
26) Sample	26	02601026	8260PC30	MDK0735-04 MSD
27) Sample	27	02701027	8260PC30	RINSE
28) Sample	28	02801028	8260PC30	10 PPB VOC CCV 2
29) Sample	29	02901029	8260PC30	RINSE

Sequence completed Tue Dec 05 00:06:44 2023

C:\MSDCHEM\1\DATA\2023 DEC\04\2023 Dec 04 0950 Quality Log.LOG

C:\MSDCHEM\1\DATA\2023 DEC\04\2023 Dec 04 0950 Sequence Log .LOG

QC Checklist for EPA 8260/624.1 - VOCs

Analysis Date: 12/4/23

<input checked="" type="checkbox"/>	QC Parameter	Acceptance Criteria	Frequency	Notes
<input checked="" type="checkbox"/>	BFB Tune	See below		
<input checked="" type="checkbox"/>	Initial Calibration	90% must meet <20%RSD	At least 6 points	If regression is used, weight as 1/x, with R <sup>2</sup> > 0.920
<input checked="" type="checkbox"/>	Initial Calibration	Reprocessed cal points must be within 70-130%		
<input checked="" type="checkbox"/>	Response Factor	Check against list on back		Include CCV RF report in data packet
<input checked="" type="checkbox"/>	Internal Standard	50-200% of mid-point CAL	All samples	
<input checked="" type="checkbox"/>	Surrogate Recovery	85-115%	All samples	
<input checked="" type="checkbox"/>	ICV/QCS	70-130%	Each ICAL	
<input checked="" type="checkbox"/>	Blanks	No interferences	Every 20 samples	
<input checked="" type="checkbox"/>	CCV	80% within ±20%	At beginning of run and every 12 hours.	
<input checked="" type="checkbox"/>	MS/MSD	±20%	Every 20 samples	
<input checked="" type="checkbox"/>	Cal Prep Form Present			
<input checked="" type="checkbox"/>	pH/Chlorine checks	pH<2 THM Chlorine check	All samples	
<input checked="" type="checkbox"/>	Dilutions Noted?			

Comments:

m/z	Required Intensity (relative abundance)
50	15 to 40% of m/z 95
75	30 to 60% of m/z 95
95	Base peak, 100% relative abundance
96	5 to 9% of m/z 95
173	Less than 2% of m/z 174
174	50 to 200% of m/z 95
175	5 to 9% of m/z 174
176	95% to 101% of m/z 174
177	5 to 9% of m/z 176

Analyst: BWP

Checklist Completed Date: 12/5/23

Reviewed By: 

Date: 12/13/23



RF Factor Table for EPA 8260/624.1 - VOCs

Analyte	RF	Check if <	Analyte	RF	Check if <
1,1,1-Trichloroethane	0.05		Carbon tetrachloride	0.1	
1,1,2,2-Tetrachloroethane	0.2		Chlorobenzene	0.4	
1,1,2-Trichloroethane	0.2		Chlorodibromomethane	0.2	
1,1-Dichloroethane	0.3		Chloroethane (Ethyl chloride)	0.01	
1,1-Dichloroethylene	0.06		Chloroform	0.3	
1,2,3-Trichloropropane	0.4		cis-1,2-Dichloroethylene	0.2	
1,2,4-Trichlorobenzene	0.4		cis-1,3-Dichloropropene	0.3	
1,2-Dibromo-3-chloropropane (DBCP)	0.01		Ethylbenzene	0.4	
1,2-Dibromoethane (EDB, Ethylene dibromide)	0.2		Isopropylbenzene	0.4	
1,2-Dichlorobenzene	0.6		m+p-xylene	0.2	
1,2-Dichloroethane (Ethylene dichloride)	0.07		Methyl bromide (Bromomethane)	0.01	
1,2-Dichloropropane	0.2		Methyl chloride (Chloromethane)	0.01	
1,3-Dichlorobenzene	0.5		Methyl tert-butyl ether (MTBE)	0.1	
1,4-Dichlorobenzene	0.6		o-Xylene	0.2	
2-Butanone (Methyl ethyl ketone, MEK)	0.01		Styrene	0.2	
2-Hexanone	0.01		Tetrachloroethylene (Perchloroethylene)	0.1	
4-Methyl-2-pentanone (MIBK)	0.03		Toluene	0.3	
Acetone	0.01		trans-1,2-Dichloroethylene	0.1	
Benzene	0.2		trans-1,3-Dichloropropylene	0.3	
Bromochloromethane	0.1		Trichloroethene (Trichloroethylene)	0.2	
Bromodichloromethane	0.3		Trichlorofluoromethane (Freon 11)	0.01	
Bromoform	0.1		Vinyl chloride	0.01	
Carbon disulfide	0.1				

Taken from Table 4, EPA Method 8260D



# Anatek Labs, Inc

1282 Alturas Drive  
Moscow, ID 83843

## Calibration Standard Preparation Form

Method: EPA 8260/624.1

Initial Calibration and CCV Standard Number: 2302582  
Initial Calibration and CCV Standard Concentration: 200 ug/mL  
Initial Calibration and CCV Standard Expiration Date: 2/28/2026

Matrix Spiking Standard Number: 2302582  
Matrix Spiking Standard Concentration: 200 ug/ml  
Matrix Spiking Standards Expiration Dates: 2/28/2026

Initial Calibration Verification (ICV) Standard Number: 2301142  
Initial Calibration Verification (ICV) Standard Concentration: 200 ug/ml  
Initial Calibration Verification (ICV) Expiration Date: 5/31/2025

Internal Standard / Surrogate Standard Number: 2204337  
Internal Standard / Surrogate Standard Concentration: 125 ug/ml  
Internal Standard / Surrogate Standard Sample Concentration: Archon adds 125 ng to 5 ml  
Expiration Date: 01/04/2024

### Initial Calibration Dilution Template (minimum of 5 calibration points)

Desired Concentration (ppb)	Stock Concentration (ppm)	uL Standard Added	Final Volume (mL)
30	200	7.5	50
20	200	5	50
15	200	7.5	100
10	200	5.0	100
5	200	2.5	100
2	200	1.0	100
0.5	10 ppb Cal std	5 ml	100
<b>ICV 10</b>	<b>200</b>	<b>5</b>	<b>100</b>

Add 2 drops of 1:1 HCl per 50mL to Standards, CCV, ICV, and Reagent Blanks.

### Calibration Prep:

ICAL and ICV Prep Date: 12/4/2023

### Solution Prepared:

- CCV
- MS/MSD
- pH check
- Chlorine check (THM)

pH paper reagent # 2002327  
Free Chlorine Test strip reagent# 2301362

Analyst: Blp  
Form CV02.02 - Eff 9 Dec 2022

Date of Preparation: 12/4/23  
Page 1 of 1

# PREPARATION BENCH SHEET

BDL0115

Matrix: Water

Prepared using: VOC - VOC

Surrogate used: 2302876

Lab Number	Analysis	Prepared - By	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Client	Extraction Comments
BDL0115-BLK1	QC	12/04/23 10:35-BKP	50	50				10		
BDL0115-BS1	QC	12/04/23 15:26-BKP	50	50	2302582		0.5	10		
BDL0115-MS1	QC	12/04/23 21:47-BKP	50	50	2302582	MDK0735-04	2.5	10		
BDL0115-MSD1	QC	12/04/23 22:16-BKP	50	50	2302582	MDK0735-04	2.5	10		
MDK0735-01	VOC 8260	12/04/23 16:54-BKP	50	50				10	PBS Engineering - Portland	
MDK0735-02	VOC 8260	12/04/23 17:24-BKP	50	50				10	PBS Engineering - Portland	
MDK0735-03	VOC 8260	12/04/23 17:53-BKP	50	50				10	PBS Engineering - Portland	
MDK0735-04	VOC 8260	12/04/23 16:25-BKP	50	50				10	PBS Engineering - Portland	
MDK0735-04	VOC Trip Blank 8260	12/04/23 14:15-BKP	50	50				10	PBS Engineering - Portland	Added for BatchQC in: BDL0115
MDK0735-05	VOC 8260	12/04/23 18:22-BKP	50	50				10	PBS Engineering - Portland	
MDK0735-06	VOC 8260	12/04/23 18:51-BKP	50	50				10	PBS Engineering - Portland	
MDK0735-07	VOC 8260	12/04/23 19:20-BKP	50	50				10	PBS Engineering - Portland	
MDK0735-08	VOC 8260	12/04/23 19:50-BKP	50	50				10	PBS Engineering - Portland	
MDK0735-09	VOC 8260	12/04/23 20:19-BKP	50	50				10	PBS Engineering - Portland	
MDK0735-10	VOC Trip Blank 8260	12/04/23 20:48-BKP	50	50				10	PBS Engineering - Portland	

Support Info: P-Syringe(s) BAL-09

Reagent	Description	LotNum
2302771	Methanol P&T	62199
2303166	HCl 1:1	-

B. PMA  
Prepared By:

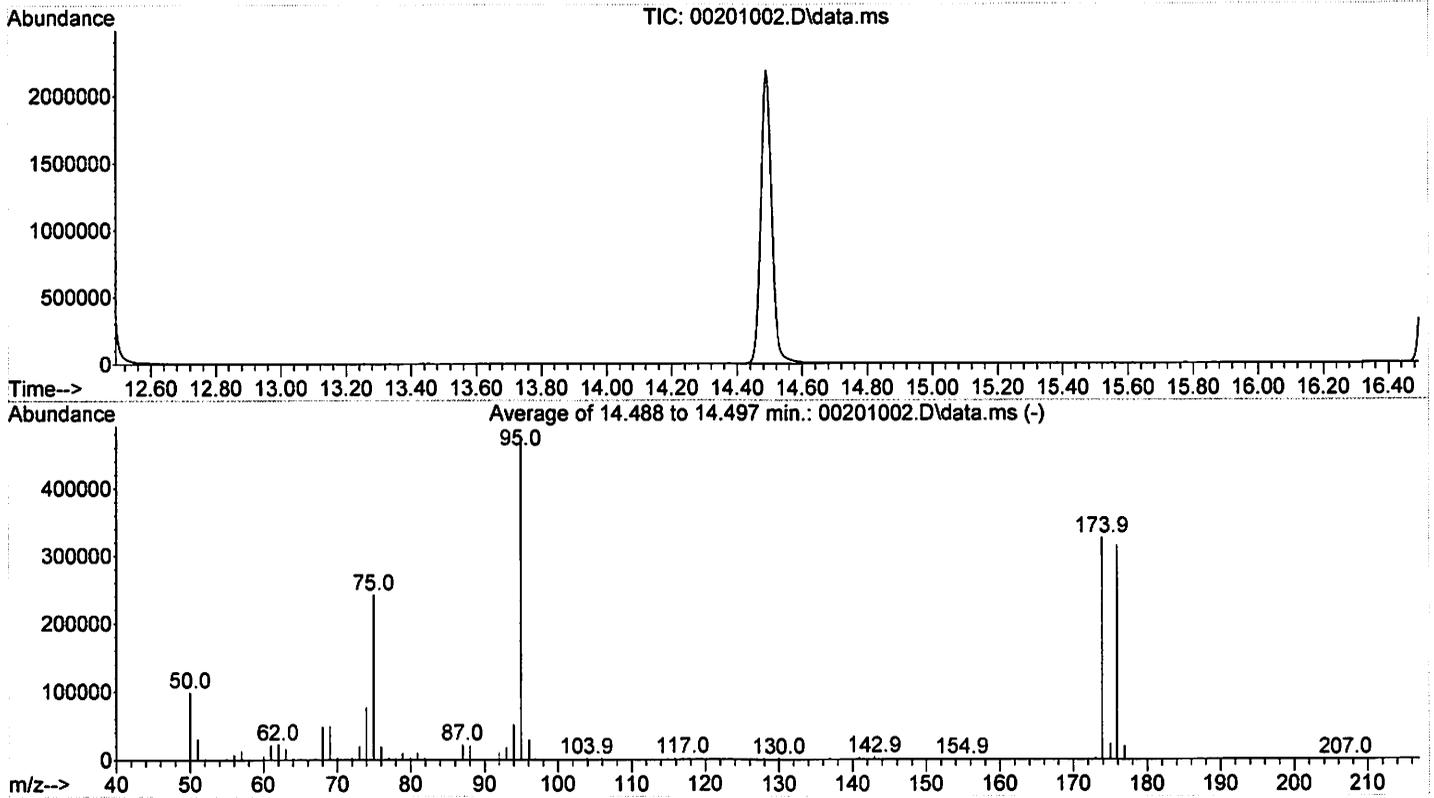
12/5/23  
Date

12/4/23  
Analytical Run Date:

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\04\  
 Data File : 00201002.D  
 Acq On : 4 Dec 2023 10:35 am  
 Operator : BKP  
 Sample : BLANK  
 Misc :  
 ALS Vial : 2 Sample Multiplier: 1

Integration File: rteint.p

Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 Last Update : Mon Dec 04 14:33:00 2023



AutoFind: Scans 2414, 2415, 2416; Background Corrected with Scan 2398

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
Mass	Mass	Limit%	Limit%	Abn%	Abn	Pass/Fail
50	95	15	40	21.1	98688	PASS
75	95	30	60	51.8	242475	PASS
95	95	100	100	100.0	468245	PASS
96	95	5	9	6.2	29061	PASS
173	174	0.00	2	0.7	2357	PASS
174	95	50	200	69.6	325845	PASS
175	174	5	9	7.0	22749	PASS
176	174	95	105	96.5	314304	PASS
177	176	5	9	6.3	19923	PASS

## Response Factor Report MSD1

Method Path : T:\Data2\Voc\HP5975\2023 METHODS\  
 Method File : DEC04.M  
 Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 Last Update : Mon Dec 04 14:33:00 2023  
 Response Via : Initial Calibration

## Calibration Files

0.5 =00301003.D 5 =00501005.D 10 =00601006.D 30 =00901009.D 20 =00801008.D 2 =00.

Compound	0.5	5	10	30	20	2	15	Avg	%RSD
-----ISTD-----									
1) I Fluorobenzene									
2) S 1,2-Dichloroet...	0.367	0.353	0.349	0.339	0.343	0.365	0.348	0.352	2.93
3) Dichlorodifluo...	0.136	0.167	0.167	0.135	0.157	0.123	0.173	0.151	12.88
4) Chloromethane	0.394	0.356	0.356	0.314	0.349	0.333	0.360	0.352	7.05
5) Vinyl chloride	0.418	0.465	0.466	0.392	0.448	0.391	0.479	0.437	8.36
6) Bromomethane	0.198	0.173	0.175	0.114	0.135	0.145	0.165	0.158	17.89
7) Chloroethane	0.280	0.273	0.282	0.213	0.245	0.236	0.277	0.258	10.42
8) Trichlorofluor...	0.484	0.579	0.581	0.473	0.551	0.449	0.601	0.531	11.53
9) Diethyl ether	0.540	0.554	0.571	0.491	0.546	0.519	0.568	0.541	5.24
10) 1,1-Dichloroet...	0.698	0.760	0.768	0.659	0.749	0.641	0.784	0.723	7.81
11) Acetone		0.199	0.180	0.143	0.156	0.244	0.178	0.183	19.39
12) Methyl iodide	0.315	0.318	0.350	0.297	0.332	0.266	0.351	0.318	9.50
13) Carbon disulfide	1.294	1.346	1.366	1.124	1.275	1.151	1.367	1.275	7.86
14) Methylene chlo...	0.522	0.433	0.447	0.375	0.419	0.421	0.441	0.437	10.13
15) MTBE (2-methox...	2.095	1.869	1.900	1.646	1.837	1.800	1.911	1.866	7.23
16) trans-1,2-Dich...	0.806	0.845	0.856	0.739	0.826	0.757	0.867	0.814	6.06
17) Acrylonitrile		0.160	0.205	0.197	0.214	0.142	0.222	0.190	16.80
18) 1,1-Dichloroet...	1.046	1.069	1.092	0.941	1.048	1.002	1.096	1.042	5.27
19) Methyl ethyl k...	0.254	0.265	0.307	0.315	0.339	0.305	0.351	0.305	11.72
20) 2,2-Dichloropr...		0.754	0.764	0.665	0.749	0.664	0.787	0.730	7.23
21) cis-1,2-Dichlo...	0.493	0.510	0.530	0.466	0.513	0.479	0.541	0.505	5.36
22) Bromochloromet...	0.276	0.281	0.292	0.240	0.274	0.274	0.294	0.276	6.50
23) Chloroform	0.891	0.886	0.914	0.777	0.869	0.877	0.909	0.875	5.26
24) S Dibromofluorom...	0.273	0.275	0.272	0.271	0.275	0.270	0.273	0.273	0.73
25) 1,1,1-Trichlor...	0.679	0.727	0.734	0.624	0.702	0.641	0.744	0.693	6.79
26) 1,1-Dichloropr...	0.712	0.808	0.817	0.692	0.789	0.682	0.835	0.762	8.48
27) Carbon tetrach...	0.432	0.536	0.548	0.472	0.537	0.435	0.569	0.504	11.23
28) Benzene	2.329	2.441	2.486	2.106	2.365	2.319	2.477	2.360	5.56
29) 1,2-Dichloroet...	0.764	0.833	0.837	0.708	0.792	0.816	0.828	0.797	5.92
30) Trichloroethene	0.477	0.486	0.491	0.416	0.467	0.451	0.493	0.469	5.84
31) 1,2-Dichloropr...	0.667	0.674	0.680	0.582	0.654	0.660	0.684	0.657	5.27
32) S Toluene-d8	1.303	1.332	1.334	1.321	1.332	1.325	1.339	1.327	0.91
33) Dibromomethane	0.258	0.265	0.270	0.236	0.262	0.259	0.274	0.261	4.71
34) Bromodichlorom...	0.664	0.672	0.682	0.583	0.652	0.631	0.681	0.652	5.44
35) cis-1,3-Dichlo...	0.780	0.899	0.943	0.836	0.935	0.845	0.964	0.886	7.63
36) Methyl isobuty...		0.756	0.826	0.748	0.828	0.678	0.877	0.785	9.11
37) Toluene	2.014	2.175	2.202	1.903	2.132	2.113	2.223	2.109	5.41
-----ISTD-----									
38) I Chlorobenzene-d5									
39) trans-1,3-Dich...	0.436	0.503	0.536	0.492	0.543	0.460	0.550	0.503	8.61
40) 1,1,2-Trichlor...	0.304	0.304	0.311	0.268	0.299	0.306	0.310	0.300	4.96
41) Tetrachloroethene	0.320	0.285	0.282	0.237	0.267	0.269	0.281	0.277	8.94
42) 2-Hexanone		0.290	0.338	0.312	0.339	0.246	0.363	0.315	13.33
43) 1,3-Dichloropr...	0.596	0.607	0.620	0.536	0.599	0.600	0.620	0.597	4.75
44) Dibromochlorom...	0.251	0.261	0.268	0.235	0.262	0.251	0.272	0.257	4.89
45) 1,2-Dibromoethane	0.262	0.274	0.286	0.250	0.277	0.268	0.289	0.272	4.99
46) Chlorobenzene	0.688	0.721	0.730	0.631	0.698	0.719	0.731	0.703	5.05
47) 1,1,1,2-Tetrac...	0.224	0.231	0.242	0.211	0.231	0.232	0.243	0.231	4.74
48) Ethylbenzene	1.122	1.260	1.304	1.156	1.279	1.189	1.329	1.234	6.38
49) m+p-Xylene	0.756	0.920	0.962	0.843	0.938	0.852	0.975	0.892	8.83
50) o-Xylene	0.737	0.874	0.919	0.823	0.915	0.814	0.944	0.861	8.54
51) Styrene	0.488	0.632	0.703	0.607	0.696	0.571	0.701	0.628	12.84
52) Bromoform	0.119	0.127	0.130	0.119	0.133	0.124	0.134	0.127	4.90
53) Isopropylbenzene	0.663	0.857	0.914	0.816	0.909	0.774	0.944	0.840	11.67

54)	S	Bromofluoroben...	0.589	0.596	0.598	0.591	0.596	0.587	0.601	0.594	0.90
55)		Bromobenzene	0.195	0.204	0.207	0.183	0.202	0.206	0.208	0.201	4.57
56)		n-Propylbenzene	0.847	1.040	1.100	0.957	1.075	0.934	1.119	1.010	9.95
57)		1,3,5-Trimethy...	0.455	0.586	0.625	0.541	0.608	0.516	0.630	0.566	11.40
58)		2-Chlorotoluene	0.514	0.613	0.629	0.551	0.614	0.575	0.638	0.591	7.69
59)		4-Chlorotoluene	0.585	0.688	0.713	0.623	0.699	0.635	0.721	0.666	7.82
60)		tert-Butylbenzene	0.261	0.324	0.339	0.298	0.337	0.285	0.349	0.313	10.39
61)		1,1,2,2-Tetrac...	0.311	0.316	0.320	0.275	0.312	0.308	0.327	0.310	5.33
62)		trans-1,4-Dich...		0.098	0.105	0.101	0.110	0.088	0.114	0.103	9.25
63)		1,2,3-Trichlor...	0.088	0.092	0.094	0.080	0.089	0.089	0.094	0.090#	5.40
64)		1,2,4-Trimethy...	0.425	0.553	0.597	0.532	0.596	0.492	0.611	0.544	12.36
65)		sec-Butylbenzene	0.499	0.659	0.704	0.615	0.698	0.563	0.721	0.637	12.98
66)		4-Isopropyltol...	0.430	0.513	0.542	0.473	0.535	0.456	0.553	0.500	9.47
67)	I	1,4-Dichlorobenzen...	-----ISTD-----								
68)	S	1,2-Dichlorobe...	0.872	0.846	0.848	0.845	0.847	0.853	0.855	0.852	1.11
69)		1,3-Dichlorobe...	0.564	0.619	0.629	0.559	0.619	0.618	0.642	0.607	5.30
70)		1,4-Dichlorobe...	0.640	0.642	0.656	0.569	0.641	0.649	0.663	0.637	4.90
71)		1,2-Dichlorobe...	0.588	0.558	0.572	0.497	0.558	0.577	0.577	0.561	5.37
72)		n-butylbenzene	0.793	0.942	1.013	0.872	0.985	0.854	1.022	0.926	9.47
73)		1,2-Dibromo-3-...	0.059	0.066	0.067	0.064	0.067	0.062	0.070	0.065#	5.80
74)		1,2,4-Trichlor...	0.195	0.228	0.246	0.236	0.246	0.230	0.251	0.233	8.14
75)		Hexachlorobuta...	0.101	0.099	0.103	0.083	0.096	0.091	0.099	0.096#	7.00
76)		Naphthalene	0.542	0.627	0.710	0.785	0.772	0.577	0.786	0.686	15.08
77)		1,2,3-Trichlor...	0.197	0.206	0.220	0.209	0.224	0.202	0.229	0.212	5.65

(#) = Out of Range

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\04\  
 Data File : 00201002.D  
 Acq On : 4 Dec 2023 10:35 am  
 Operator : BKP  
 Sample : BLANK  
 Misc :  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 04 14:40:42 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Dec 04 14:33:00 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	7.655	96	1300149	20.00	ppb	0.00
38) Chlorobenzene-d5	12.462	117	2001163	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.525	152	879968	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.163	65	472173	20.63	ppb	0.01
Spiked Amount	20.000	Range 85 - 115	Recovery	=	103.15%	
24) Dibromofluoromethane	6.668	111	345703	19.49	ppb	0.01
Spiked Amount	20.000		Recovery	=	97.45%	
32) Toluene-d8	10.109	98	1688245	19.57	ppb	0.00
Spiked Amount	20.000		Recovery	=	97.85%	
54) Bromofluorobenzene	14.491	95	1145611	19.28	ppb	0.00
Spiked Amount	20.000		Recovery	=	96.40%	
68) 1,2-Dichlorobenzene-d4	17.190	152	770572	20.55	ppb	0.00
Spiked Amount	20.000		Recovery	=	102.75%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\04\  
 Data File : 00301003.D  
 Acq On : 4 Dec 2023 11:04 am  
 Operator : BKP  
 Sample : 0.5 PPB VOC ICAL  
 Misc :  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 04 14:35:03 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Dec 04 14:33:00 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev (Min)	
<b>Internal Standards</b>							
1) Fluorobenzene	7.651	96	1303093	20.00	ppb	0.00	
38) Chlorobenzene-d5	12.459	117	1993134	20.00	ppb	0.00	
67) 1,4-Dichlorobenzene-d4	16.523	152	900403	20.00	ppb	0.00	
<b>System Monitoring Compounds</b>							
2) 1,2-Dichloroethane-d4	7.158	65	478358	20.85	ppb	0.00	
Spiked Amount	20.000	Range 85 - 115	Recovery	=	104.25%		
24) Dibromofluoromethane	6.664	111	355681	20.01	ppb	0.00	
Spiked Amount	20.000		Recovery	=	100.05%		
32) Toluene-d8	10.107	98	1697590	19.64	ppb	0.00	
Spiked Amount	20.000		Recovery	=	98.20%		
54) Bromofluorobenzene	14.490	95	1173138	19.82	ppb	0.00	
Spiked Amount	20.000		Recovery	=	99.10%		
68) 1,2-Dichlorobenzene-d4	17.189	152	785304	20.47	ppb	0.00	
Spiked Amount	20.000		Recovery	=	102.35%		
<b>Target Compounds</b>							
							Qvalue
3) Dichlorodifluoromethane	1.050	85	4427	0.60	ppb		99
4) Chloromethane	1.258	50	12834	0.58	ppb		99
5) Vinyl chloride	1.410	62	13619	0.48	ppb		92
6) Bromomethane	1.867	96	6453	0.59	ppb		92
7) Chloroethane	2.026	64	9129	0.58	ppb		92
8) Trichlorofluoromethane	2.395	101	15755	0.46	ppb		92
9) Diethyl ether	2.867	59	17604	0.50	ppb		92
10) 1,1-Dichloroethene	3.172	61	22750	0.48	ppb		88
11) Acetone	3.394	43	21865m	0.66	ppb		
12) Methyl iodide	3.394	142	10265	0.45	ppb		89
13) Carbon disulfide	3.470	76	42169	0.51	ppb		100
14) Methylene chloride	3.976	84	16994	0.60	ppb		92
15) MTBE (2-methoxy-2-meth...	4.408	73	68255	0.56	ppb		90
16) trans-1,2-Dichloroethene	4.384	61	26272	0.50	ppb	#	74
17) Acrylonitrile	4.513	53	3404m	0.27	ppb		
18) 1,1-Dichloroethane	5.031	63	34071	0.50	ppb		97
19) Methyl ethyl ketone	6.112	43	8009m	0.39	ppb		
20) 2,2-Dichloropropane	5.892	77	23279	0.49	ppb		98
21) cis-1,2-Dichloroethene	5.933	96	16069	0.49	ppb		99
22) Bromochloromethane	6.287	130	8990	0.50	ppb		81
23) Chloroform	6.420	83	29036	0.51	ppb		97
25) 1,1,1-Trichloroethane	6.643	97	22127	0.49	ppb		82
26) 1,1-Dichloropropene	6.900	75	23186	0.47	ppb		71
27) Carbon tetrachloride	6.880	117	14063	0.43	ppb		81
28) Benzene	7.210	78	75857	0.49	ppb		100
29) 1,2-Dichloroethane	7.277	62	24894	0.48	ppb		97
30) Trichloroethene	8.206	130	15537	0.51	ppb	#	86
31) 1,2-Dichloropropane	8.560	63	21726	0.51	ppb		94
33) Dibromomethane	8.752	174	8408	0.50	ppb	#	46
34) Bromodichloromethane	9.005	83	21644	0.51	ppb		95
35) cis-1,3-Dichloropropene	9.727	75	25407	0.56	ppb		79
36) Methyl isobutyl ketone	10.007	43	19358	0.35	ppb		94

37)	Toluene	10.213	91	65599	0.48	ppb	98
39)	trans-1,3-Dichloropropene	10.635	75	21750	0.40	ppb	84
40)	1,1,2-Trichloroethane	10.907	97	15144	0.51	ppb #	81
41)	Tetrachloroethene	11.073	166	15937	0.58	ppb	82
42)	2-Hexanone	11.400	43	10344	0.31	ppb	96
43)	1,3-Dichloropropane	11.173	76	29705	0.50	ppb	98
44)	Dibromochloromethane	11.522	129	12516	0.49	ppb	91
45)	1,2-Dibromoethane	11.698	107	13057	0.48	ppb	98
46)	Chlorobenzene	12.506	112	34285	0.49	ppb	82
47)	1,1,1,2-Tetrachloroethane	12.661	131	11155	0.49	ppb	99
48)	Ethylbenzene	12.713	91	55905	0.45	ppb	94
49)	m+p-Xylene	12.917	91	75364	0.85	ppb	90
50)	o-Xylene	13.586	91	36708	0.43	ppb	81
51)	Styrene	13.626	104	24295	0.58	ppb	90
52)	Bromoform	13.920	173	5928	0.47	ppb	95
53)	Isopropylbenzene	14.235	105	33055	0.40	ppb	99
55)	Bromobenzene	14.728	156	9694	0.48	ppb #	45
56)	n-Propylbenzene	14.958	91	42183	0.42	ppb #	81
57)	1,3,5-Trimethylbenzene	15.283	105	22691	0.40	ppb	97
58)	2-Chlorotoluene	15.079	91	25626	0.44	ppb #	82
59)	4-Chlorotoluene	15.285	91	29130	0.44	ppb #	79
60)	tert-Butylbenzene	15.843	91	13023	0.42	ppb #	81
61)	1,1,2,2-Tetrachloroethane	14.807	83	15477	0.50	ppb	98
62)	trans-1,4-Dichloro-2-b...	14.936	53	4185m	0.39	ppb	
63)	1,2,3-Trichloropropane	14.858	110	4397	0.49	ppb #	75
64)	1,2,4-Trimethylbenzene	15.938	105	21174	0.39	ppb	96
65)	sec-Butylbenzene	16.236	105	24855	0.39	ppb #	85
66)	4-Isopropyltoluene	16.516	119	21438	0.43	ppb #	81
69)	1,3-Dichlorobenzene	16.403	146	12698	0.46	ppb	94
70)	1,4-Dichlorobenzene	16.563	146	14415	0.50	ppb	88
71)	1,2-Dichlorobenzene	17.220	146	13230	0.52	ppb #	72
72)	n-butylbenzene	17.252	91	17857	0.43	ppb #	86
73)	1,2-Dibromo-3-chloropr...	18.654	157	1321m	0.54	ppb	
74)	1,2,4-Trichlorobenzene	20.140	180	4385	0.42	ppb	94
75)	Hexachlorobutadiene	20.471	225	2278	0.53	ppb	75
76)	Naphthalene	20.582	128	12193	0.62	ppb	90
77)	1,2,3-Trichlorobenzene	21.020	180	4432	0.46	ppb	91

(#) = qualifier out of range (m) = manual integration (+) = signals summed

DEC04.M Mon Dec 04 14:35:13 2023

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\04\  
 Data File : 00401004.D  
 Acq On : 4 Dec 2023 11:33 am  
 Operator : BKP  
 Sample : 2 PPB VOC ICAL  
 Misc :  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 04 14:36:08 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Dec 04 14:33:00 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
<b>Internal Standards</b>							
1) Fluorobenzene	7.651	96	1341693	20.00	ppb	0.00	
38) Chlorobenzene-d5	12.459	117	2072343	20.00	ppb	0.00	
67) 1,4-Dichlorobenzene-d4	16.523	152	944134	20.00	ppb	0.00	
<b>System Monitoring Compounds</b>							
2) 1,2-Dichloroethane-d4	7.159	65	489072	20.70	ppb	0.01	
Spiked Amount	20.000	Range 85 - 115	Recovery	=	103.50%		
24) Dibromofluoromethane	6.663	111	362690	19.82	ppb	0.00	
Spiked Amount	20.000		Recovery	=	99.10%		
32) Toluene-d8	10.106	98	1777729	19.97	ppb	0.00	
Spiked Amount	20.000		Recovery	=	99.85%		
54) Bromofluorobenzene	14.489	95	1215599	19.76	ppb	0.00	
Spiked Amount	20.000		Recovery	=	98.80%		
68) 1,2-Dichlorobenzene-d4	17.188	152	805135	20.01	ppb	0.00	
Spiked Amount	20.000		Recovery	=	100.05%		
<b>Target Compounds</b>							
							Qvalue
3) Dichlorodifluoromethane	1.053	85	16535	1.56	ppb		99
4) Chloromethane	1.264	50	44659	1.96	ppb		95
5) Vinyl chloride	1.413	62	52437	1.79	ppb		98
6) Bromomethane	1.870	96	19500	1.59	ppb		99
7) Chloroethane	2.025	64	31715	1.67	ppb		97
8) Trichlorofluoromethane	2.395	101	60199	1.69	ppb		91
9) Diethyl ether	2.870	59	69677	1.92	ppb		93
10) 1,1-Dichloroethene	3.178	61	85977	1.77	ppb		89
11) Acetone	3.366	43	32738	1.71	ppb		87
12) Methyl iodide	3.401	142	35658	1.51	ppb		96
13) Carbon disulfide	3.477	76	154404	1.81	ppb		100
14) Methylene chloride	3.980	84	56484	1.93	ppb		95
15) MTBE (2-methoxy-2-meth...	4.410	73	241469	1.93	ppb		90
16) trans-1,2-Dichloroethene	4.386	61	101564	1.86	ppb	#	76
17) Acrylonitrile	4.534	53	19758m	1.55	ppb		
18) 1,1-Dichloroethane	5.032	63	134450	1.92	ppb		96
19) Methyl ethyl ketone	6.084	43	39338m	1.86	ppb		
20) 2,2-Dichloropropane	5.894	77	89028	1.82	ppb		93
21) cis-1,2-Dichloroethene	5.930	96	64211	1.90	ppb		100
22) Bromochloromethane	6.286	130	36723	1.99	ppb		96
23) Chloroform	6.421	83	117650	2.00	ppb		95
25) 1,1,1-Trichloroethane	6.644	97	85954	1.85	ppb		78
26) 1,1-Dichloropropene	6.900	75	91489	1.79	ppb		76
27) Carbon tetrachloride	6.882	117	58415	1.73	ppb		100
28) Benzene	7.210	78	311095	1.96	ppb		97
29) 1,2-Dichloroethane	7.276	62	109445	2.05	ppb		97
30) Trichloroethene	8.206	130	60535	1.93	ppb	#	80
31) 1,2-Dichloropropane	8.558	63	88509	2.01	ppb		96
33) Dibromomethane	8.753	174	34771	1.99	ppb	#	40
34) Bromodichloromethane	9.002	83	84714	1.94	ppb		95
35) cis-1,3-Dichloropropene	9.718	75	113360	1.84	ppb		78
36) Methyl isobutyl ketone	10.002	43	90935	1.60	ppb		90

37)	Toluene	10.212	91	283531	2.00	ppb	99
39)	trans-1,3-Dichloropropene	10.629	75	95415	1.70	ppb	80
40)	1,1,2-Trichloroethane	10.903	97	63324	2.04	ppb	88
41)	Tetrachloroethene	11.072	166	55848	1.94	ppb #	89
42)	2-Hexanone	11.389	43	51041	1.47	ppb	84
43)	1,3-Dichloropropane	11.168	76	124439	2.01	ppb	100
44)	Dibromochloromethane	11.521	129	51965	1.95	ppb	98
45)	1,2-Dibromoethane	11.691	107	55581	1.97	ppb	98
46)	Chlorobenzene	12.505	112	148969	2.05	ppb #	74
47)	1,1,1,2-Tetrachloroethane	12.660	131	48156	2.02	ppb	98
48)	Ethylbenzene	12.711	91	246501	1.93	ppb	92
49)	m+p-Xylene	12.915	91	353173	3.82	ppb	88
50)	o-Xylene	13.585	91	168601	1.89	ppb	87
51)	Styrene	13.624	104	118248	1.77	ppb	83
52)	Bromoform	13.919	173	25767	1.95	ppb	98
53)	Isopropylbenzene	14.234	105	160303	1.84	ppb	94
55)	Bromobenzene	14.727	156	42757	2.06	ppb #	40
56)	n-Propylbenzene	14.956	91	193476	1.85	ppb #	84
57)	1,3,5-Trimethylbenzene	15.282	105	106997	1.82	ppb	91
58)	2-Chlorotoluene	15.078	91	119226	1.95	ppb #	81
59)	4-Chlorotoluene	15.281	91	131562	1.91	ppb #	77
60)	tert-Butylbenzene	15.843	91	59061	1.82	ppb #	79
61)	1,1,2,2-Tetrachloroethane	14.804	83	63761	1.99	ppb	92
62)	trans-1,4-Dichloro-2-b...	14.923	53	18190	1.63	ppb	81
63)	1,2,3-Trichloropropane	14.853	110	18479	1.99	ppb	94
64)	1,2,4-Trimethylbenzene	15.936	105	101987	1.81	ppb	89
65)	sec-Butylbenzene	16.236	105	116573	1.77	ppb #	87
66)	4-Isopropyltoluene	16.516	119	94501	1.82	ppb #	91
69)	1,3-Dichlorobenzene	16.401	146	58334	2.04	ppb	94
70)	1,4-Dichlorobenzene	16.564	146	61257	2.04	ppb	93
71)	1,2-Dichlorobenzene	17.220	146	54505	2.06	ppb	89
72)	n-butylbenzene	17.250	91	80656	1.85	ppb #	85
73)	1,2-Dibromo-3-chloropr...	18.654	157	5899	1.89	ppb	86
74)	1,2,4-Trichlorobenzene	20.141	180	21742	1.98	ppb	97
75)	Hexachlorobutadiene	20.471	225	8626	1.90	ppb	91
76)	Naphthalene	20.578	128	54444	1.76	ppb	90
77)	1,2,3-Trichlorobenzene	21.019	180	19025	1.90	ppb	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

DEC04.M Mon Dec 04 14:36:47 2023

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\04\  
 Data File : 00501005.D  
 Acq On : 4 Dec 2023 12:02 pm  
 Operator : BKP  
 Sample : 5 PPB VOC ICAL  
 Misc :  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 04 14:37:45 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Dec 04 14:33:00 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
<b>Internal Standards</b>							
1) Fluorobenzene	7.653	96	1368641	20.00	ppb	0.00	
38) Chlorobenzene-d5	12.459	117	2117694	20.00	ppb	0.00	
67) 1,4-Dichlorobenzene-d4	16.523	152	978787	20.00	ppb	0.00	
<b>System Monitoring Compounds</b>							
2) 1,2-Dichloroethane-d4	7.158	65	483614	20.07	ppb	0.00	
Spiked Amount	20.000		Recovery	=	100.35%		
24) Dibromofluoromethane	6.666	111	376905	20.19	ppb	0.00	
Spiked Amount	20.000		Recovery	=	100.95%		
32) Toluene-d8	10.107	98	1823549	20.09	ppb	0.00	
Spiked Amount	20.000		Recovery	=	100.45%		
54) Bromofluorobenzene	14.489	95	1262001	20.07	ppb	0.00	
Spiked Amount	20.000		Recovery	=	100.35%		
68) 1,2-Dichlorobenzene-d4	17.188	152	827849	19.85	ppb	0.00	
Spiked Amount	20.000		Recovery	=	99.25%		
<b>Target Compounds</b>							
							Qvalue
3) Dichlorodifluoromethane	1.060	85	57054	4.82	ppb		97
4) Chloromethane	1.270	50	121743	5.24	ppb		100
5) Vinyl chloride	1.419	62	159118	5.32	ppb		98
6) Bromomethane	1.879	96	59116	4.79	ppb		95
7) Chloroethane	2.035	64	93478	4.72	ppb		94
8) Trichlorofluoromethane	2.401	101	198020	5.45	ppb		98
9) Diethyl ether	2.873	59	189650	5.12	ppb		92
10) 1,1-Dichloroethene	3.185	61	259913	5.26	ppb		89
11) Acetone	3.387	43	67135m	5.10	ppb		
12) Methyl iodide	3.408	142	108676	4.58	ppb		93
13) Carbon disulfide	3.484	76	460409	5.28	ppb		100
14) Methylene chloride	3.982	84	148083	4.95	ppb		97
15) MTBE (2-methoxy-2-meth...	4.410	73	639382	5.01	ppb		89
16) trans-1,2-Dichloroethene	4.388	61	289064	5.19	ppb	#	75
17) Acrylonitrile	4.476	53	54873	4.22	ppb		89
18) 1,1-Dichloroethane	5.035	63	365730	5.13	ppb		96
19) Methyl ethyl ketone	6.040	43	90610	4.20	ppb		90
20) 2,2-Dichloropropane	5.897	77	258158	5.16	ppb		97
21) cis-1,2-Dichloroethene	5.930	96	174595	5.06	ppb		96
22) Bromochloromethane	6.286	130	96283	5.10	ppb		99
23) Chloroform	6.421	83	303083	5.06	ppb		95
25) 1,1,1-Trichloroethane	6.647	97	248906	5.25	ppb		82
26) 1,1-Dichloropropene	6.902	75	276302	5.30	ppb		74
27) Carbon tetrachloride	6.884	117	183270	5.31	ppb		96
28) Benzene	7.213	78	835152	5.17	ppb		100
29) 1,2-Dichloroethane	7.275	62	285120	5.23	ppb		97
30) Trichloroethene	8.206	130	166178	5.18	ppb	#	82
31) 1,2-Dichloropropane	8.558	63	230782	5.13	ppb		96
33) Dibromomethane	8.750	174	90599	5.08	ppb	#	32
34) Bromodichloromethane	9.004	83	229963	5.15	ppb		94
35) cis-1,3-Dichloropropene	9.715	75	307440	4.67	ppb		76
36) Methyl isobutyl ketone	10.000	43	258535	4.50	ppb		93

37)	Toluene	10.212	91	744278	5.16	ppb	98
39)	trans-1,3-Dichloropropene	10.624	75	266156	4.66	ppb	77
40)	1,1,2-Trichloroethane	10.900	97	160770	5.06	ppb	87
41)	Tetrachloroethene	11.073	166	150995	5.14	ppb	89
42)	2-Hexanone	11.377	43	153349	4.32	ppb	91
43)	1,3-Dichloropropane	11.165	76	321335	5.08	ppb	98
44)	Dibromochloromethane	11.520	129	138443	5.08	ppb	98
45)	1,2-Dibromoethane	11.689	107	145081	5.03	ppb	97
46)	Chlorobenzene	12.506	112	381832	5.13	ppb #	77
47)	1,1,1,2-Tetrachloroethane	12.660	131	122502	5.02	ppb	96
48)	Ethylbenzene	12.711	91	666868	5.10	ppb	90
49)	m+p-Xylene	12.915	91	974276	10.31	ppb	90
50)	o-Xylene	13.584	91	462676	5.08	ppb	91
51)	Styrene	13.622	104	334336	4.53	ppb	81
52)	Bromoform	13.919	173	67137	4.98	ppb	93
53)	Isopropylbenzene	14.234	105	453765	5.10	ppb	99
55)	Bromobenzene	14.726	156	107898	5.08	ppb #	42
56)	n-Propylbenzene	14.955	91	550781	5.15	ppb #	85
57)	1,3,5-Trimethylbenzene	15.282	105	310004	5.17	ppb	93
58)	2-Chlorotoluene	15.077	91	324587	5.19	ppb #	77
59)	4-Chlorotoluene	15.279	91	362447m	5.14	ppb	
60)	tert-Butylbenzene	15.843	91	171295	5.16	ppb #	69
61)	1,1,2,2-Tetrachloroethane	14.803	83	167105	5.10	ppb	90
62)	trans-1,4-Dichloro-2-b...	14.919	53	51702	4.54	ppb	95
63)	1,2,3-Trichloropropane	14.853	110	48534	5.11	ppb	93
64)	1,2,4-Trimethylbenzene	15.936	105	292669	5.08	ppb	90
65)	sec-Butylbenzene	16.236	105	349065	5.17	ppb #	89
66)	4-Isopropyltoluene	16.515	119	271812	5.13	ppb #	90
69)	1,3-Dichlorobenzene	16.401	146	151498	5.10	ppb	94
70)	1,4-Dichlorobenzene	16.564	146	157122	5.04	ppb	93
71)	1,2-Dichlorobenzene	17.221	146	136628	4.98	ppb	86
72)	n-butylbenzene	17.250	91	230597	5.09	ppb #	89
73)	1,2-Dibromo-3-chloropr...	18.655	157	16135	4.82	ppb	96
74)	1,2,4-Trichlorobenzene	20.139	180	55757	4.89	ppb	95
75)	Hexachlorobutadiene	20.471	225	24167	5.14	ppb	83
76)	Naphthalene	20.577	128	153442	4.32	ppb	84
77)	1,2,3-Trichlorobenzene	21.018	180	50436	4.86	ppb	91

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\04\  
 Data File : 00601006.D  
 Acq On : 4 Dec 2023 12:31 pm  
 Operator : BKP  
 Sample : 10 PPB VOC ICAL  
 Misc :  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Dec 04 14:38:08 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Dec 04 14:33:00 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
<b>Internal Standards</b>							
1) Fluorobenzene	7.651	96	1387468	20.00	ppb	0.00	
38) Chlorobenzene-d5	12.458	117	2140683	20.00	ppb	0.00	
67) 1,4-Dichlorobenzene-d4	16.521	152	1001532	20.00	ppb	0.00	
<b>System Monitoring Compounds</b>							
2) 1,2-Dichloroethane-d4	7.154	65	484690	19.84	ppb	0.00	
Spiked Amount	20.000	Range 85 - 115	Recovery	=	99.20%		
24) Dibromofluoromethane	6.661	111	377930	19.97	ppb	0.00	
Spiked Amount	20.000		Recovery	=	99.85%		
32) Toluene-d8	10.105	98	1851497	20.12	ppb	0.00	
Spiked Amount	20.000		Recovery	=	100.60%		
54) Bromofluorobenzene	14.488	95	1279193	20.13	ppb	0.00	
Spiked Amount	20.000		Recovery	=	100.65%		
68) 1,2-Dichlorobenzene-d4	17.187	152	848884	19.89	ppb	0.00	
Spiked Amount	20.000		Recovery	=	99.45%		
<b>Target Compounds</b>							
							Qvalue
3) Dichlorodifluoromethane	1.054	85	115791	9.86	ppb		96
4) Chloromethane	1.261	50	247050	10.49	ppb		99
5) Vinyl chloride	1.413	62	323203	10.66	ppb		97
6) Bromomethane	1.873	96	121182	10.50	ppb		95
7) Chloroethane	2.029	64	195671	10.21	ppb		99
8) Trichlorofluoromethane	2.395	101	403119	10.94	ppb		97
9) Diethyl ether	2.865	59	396305	10.55	ppb		90
10) 1,1-Dichloroethene	3.179	61	532518	10.62	ppb		90
11) Acetone	3.352	43	125175	10.76	ppb		77
12) Methyl iodide	3.401	142	243020	10.37	ppb		92
13) Carbon disulfide	3.477	76	947522	10.71	ppb		100
14) Methylene chloride	3.975	84	310029	10.23	ppb		96
15) MTBE (2-methoxy-2-meth...	4.403	73	1318441	10.19	ppb		91
16) trans-1,2-Dichloroethene	4.381	61	593903	10.52	ppb	#	75
17) Acrylonitrile	4.462	53	141957	10.77	ppb		94
18) 1,1-Dichloroethane	5.031	63	757834	10.49	ppb		94
19) Methyl ethyl ketone	6.023	43	212872	9.65	ppb		85
20) 2,2-Dichloropropane	5.893	77	530282	10.46	ppb		100
21) cis-1,2-Dichloroethene	5.925	96	367770	10.50	ppb		99
22) Bromochloromethane	6.280	130	202529	10.59	ppb		96
23) Chloroform	6.418	83	634273	10.45	ppb		96
25) 1,1,1-Trichloroethane	6.644	97	508920	10.59	ppb		78
26) 1,1-Dichloropropene	6.898	75	567120	10.73	ppb		73
27) Carbon tetrachloride	6.881	117	380239	10.87	ppb		96
28) Benzene	7.209	78	1724808	10.53	ppb		100
29) 1,2-Dichloroethane	7.270	62	580719	10.50	ppb		98
30) Trichloroethene	8.204	130	340460	10.47	ppb	#	83
31) 1,2-Dichloropropane	8.554	63	471408	10.34	ppb		97
33) Dibromomethane	8.746	174	187363	10.37	ppb	#	35
34) Bromodichloromethane	9.001	83	473105	10.45	ppb		93
35) cis-1,3-Dichloropropene	9.710	75	654187	9.89	ppb		76
36) Methyl isobutyl ketone	9.995	43	572728	10.00	ppb		88

37) Toluene	10.209	91	1527599	10.44	ppb	97
39) trans-1,3-Dichloropropene	10.620	75	573700	10.07	ppb	79
40) 1,1,2-Trichloroethane	10.898	97	333227	10.37	ppb	86
41) Tetrachloroethene	11.071	166	301572	10.16	ppb #	89
42) 2-Hexanone	11.368	43	361413	10.16	ppb	84
43) 1,3-Dichloropropane	11.162	76	663092	10.38	ppb	99
44) Dibromochloromethane	11.518	129	287280	10.43	ppb	99
45) 1,2-Dibromoethane	11.686	107	305609	10.48	ppb	99
46) Chlorobenzene	12.505	112	781174	10.39	ppb #	75
47) 1,1,1,2-Tetrachloroethane	12.658	131	258607	10.48	ppb	97
48) Ethylbenzene	12.709	91	1395414	10.56	ppb	90
49) m+p-Xylene	12.913	91	2059785	21.56	ppb	88
50) o-Xylene	13.583	91	983342	10.68	ppb	88
51) Styrene	13.618	104	752269	10.08	ppb	77
52) Bromoform	13.916	173	139140	10.22	ppb	99
53) Isopropylbenzene	14.233	105	978083	10.88	ppb	95
55) Bromobenzene	14.724	156	221859	10.33	ppb #	38
56) n-Propylbenzene	14.954	91	1177379	10.89	ppb #	86
57) 1,3,5-Trimethylbenzene	15.280	105	669142	11.05	ppb	94
58) 2-Chlorotoluene	15.076	91	673489	10.65	ppb #	79
59) 4-Chlorotoluene	15.278	91	763571	10.71	ppb #	79
60) tert-Butylbenzene	15.842	91	362729	10.82	ppb #	72
61) 1,1,2,2-Tetrachloroethane	14.802	83	342702	10.34	ppb	93
62) trans-1,4-Dichloro-2-b...	14.916	53	112295	9.81	ppb	97
63) 1,2,3-Trichloropropane	14.852	110	100999	10.53	ppb	90
64) 1,2,4-Trimethylbenzene	15.934	105	639039	10.98	ppb	91
65) sec-Butylbenzene	16.235	105	753962	11.06	ppb #	90
66) 4-Isopropyltoluene	16.513	119	580275	10.83	ppb #	93
69) 1,3-Dichlorobenzene	16.399	146	315104	10.36	ppb	92
70) 1,4-Dichlorobenzene	16.562	146	328266	10.29	ppb	95
71) 1,2-Dichlorobenzene	17.220	146	286373	10.19	ppb	94
72) n-butylbenzene	17.249	91	507138	10.94	ppb #	89
73) 1,2-Dibromo-3-chloropr...	18.654	157	33687	9.84	ppb	93
74) 1,2,4-Trichlorobenzene	20.138	180	123178	10.55	ppb	93
75) Hexachlorobutadiene	20.470	225	51535	10.70	ppb	95
76) Naphthalene	20.576	128	355556	9.44	ppb	84
77) 1,2,3-Trichlorobenzene	21.017	180	110093	10.36	ppb	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

DEC04.M Mon Dec 04 14:38:08 2023

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\04\  
 Data File : 00701007.D  
 Acq On : 4 Dec 2023 1:00 pm  
 Operator : BKP  
 Sample : 15 PPB VOC ICAL  
 Misc :  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Dec 04 14:38:56 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Dec 04 14:33:00 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev (Min)	
<b>Internal Standards</b>							
1) Fluorobenzene	7.652	96	1397784	20.00	ppb	0.00	
38) Chlorobenzene-d5	12.458	117	2155523	20.00	ppb	0.00	
67) 1,4-Dichlorobenzene-d4	16.522	152	1014999	20.00	ppb	0.00	
<b>System Monitoring Compounds</b>							
2) 1,2-Dichloroethane-d4	7.156	65	486165	19.75	ppb	0.00	
Spiked Amount	20.000	Range 85 - 115	Recovery	=	98.75%		
24) Dibromofluoromethane	6.664	111	381826	20.02	ppb	0.00	
Spiked Amount	20.000		Recovery	=	100.10%		
32) Toluene-d8	10.106	98	1871555	20.18	ppb	0.00	
Spiked Amount	20.000		Recovery	=	100.90%		
54) Bromofluorobenzene	14.489	95	1296233	20.25	ppb	0.00	
Spiked Amount	20.000		Recovery	=	101.25%		
68) 1,2-Dichlorobenzene-d4	17.187	152	867466	20.06	ppb	0.00	
Spiked Amount	20.000		Recovery	=	100.30%		
<b>Target Compounds</b>							
							Qvalue
3) Dichlorodifluoromethane	1.057	85	181641	16.20	ppb		100
4) Chloromethane	1.267	50	377641	15.92	ppb		98
5) Vinyl chloride	1.416	62	502121	16.44	ppb		97
6) Bromomethane	1.876	96	172588	16.36	ppb		96
7) Chloroethane	2.029	64	290458	16.04	ppb		100
8) Trichlorofluoromethane	2.395	101	630065	16.98	ppb		96
9) Diethyl ether	2.868	59	595334	15.73	ppb		88
10) 1,1-Dichloroethene	3.178	61	821997	16.28	ppb		88
11) Acetone	3.345	43	186742	16.72	ppb		83
12) Methyl iodide	3.408	142	370722m	16.14	ppb		
13) Carbon disulfide	3.477	76	1432850	16.08	ppb		100
14) Methylene chloride	3.978	84	462588	15.15	ppb		95
15) MTBE (2-methoxy-2-meth...	4.406	73	2003817	15.37	ppb		91
16) trans-1,2-Dichloroethene	4.383	61	909348	15.99	ppb	#	74
17) Acrylonitrile	4.455	53	233164	17.56	ppb		91
18) 1,1-Dichloroethane	5.033	63	1148582	15.77	ppb		96
19) Methyl ethyl ketone	6.022	43	368323	16.41	ppb		89
20) 2,2-Dichloropropane	5.896	77	824535	16.15	ppb		100
21) cis-1,2-Dichloroethene	5.925	96	567262	16.08	ppb		97
22) Bromochloromethane	6.282	130	307752	15.97	ppb		98
23) Chloroform	6.420	83	952912	15.59	ppb		95
25) 1,1,1-Trichloroethane	6.646	97	779915	16.10	ppb		82
26) 1,1-Dichloropropene	6.900	75	875522	16.44	ppb		74
27) Carbon tetrachloride	6.883	117	596510	16.93	ppb		99
28) Benzene	7.211	78	2596349	15.74	ppb		99
29) 1,2-Dichloroethane	7.271	62	868438	15.59	ppb		96
30) Trichloroethene	8.205	130	516962	15.78	ppb	#	82
31) 1,2-Dichloropropane	8.555	63	716574	15.60	ppb		96
33) Dibromomethane	8.745	174	287190	15.77	ppb	#	37
34) Bromodichloromethane	9.002	83	714363	15.67	ppb		93
35) cis-1,3-Dichloropropene	9.710	75	1011094	15.58	ppb		78
36) Methyl isobutyl ketone	9.994	43	919033	16.24	ppb		91

37)	Toluene	10.210	91	2330363	15.81	ppb	99
39)	trans-1,3-Dichloropropene	10.619	75	889566	15.71	ppb	80
40)	1,1,2-Trichloroethane	10.898	97	501165	15.49	ppb #	85
41)	Tetrachloroethene	11.072	166	454442	15.20	ppb #	89
42)	2-Hexanone	11.364	43	587119	16.52	ppb	88
43)	1,3-Dichloropropane	11.162	76	1002151	15.58	ppb	99
44)	Dibromochloromethane	11.518	129	440149	15.87	ppb	96
45)	1,2-Dibromoethane	11.686	107	467762	15.94	ppb	99
46)	Chlorobenzene	12.505	112	1181613	15.61	ppb #	77
47)	1,1,1,2-Tetrachloroethane	12.659	131	392737	15.81	ppb	99
48)	Ethylbenzene	12.709	91	2148886	16.15	ppb	91
49)	m+p-Xylene	12.913	91	3153036	32.78	ppb	87
50)	o-Xylene	13.583	91	1525336	16.45	ppb	88
51)	Styrene	13.618	104	1132746	15.43	ppb	76
52)	Bromoform	13.917	173	217230	15.84	ppb	99
53)	Isopropylbenzene	14.233	105	1526853	16.87	ppb	97
55)	Bromobenzene	14.725	156	336839	15.57	ppb #	40
56)	n-Propylbenzene	14.953	91	1809502	16.62	ppb #	86
57)	1,3,5-Trimethylbenzene	15.280	105	1017697	16.69	ppb	95
58)	2-Chlorotoluene	15.076	91	1031313	16.20	ppb #	78
59)	4-Chlorotoluene	15.278	91	1166310	16.24	ppb #	79
60)	tert-Butylbenzene	15.842	91	564347	16.71	ppb #	73
61)	1,1,2,2-Tetrachloroethane	14.802	83	528178	15.83	ppb	90
62)	trans-1,4-Dichloro-2-b...	14.916	53	184991	16.16	ppb	98
63)	1,2,3-Trichloropropane	14.852	110	152761	15.81	ppb	96
64)	1,2,4-Trimethylbenzene	15.934	105	987876	16.86	ppb	93
65)	sec-Butylbenzene	16.235	105	1166221	16.98	ppb #	90
66)	4-Isopropyltoluene	16.513	119	893919	16.57	ppb #	93
69)	1,3-Dichlorobenzene	16.399	146	488639	15.86	ppb	92
70)	1,4-Dichlorobenzene	16.563	146	504621	15.61	ppb	96
71)	1,2-Dichlorobenzene	17.220	146	438886	15.42	ppb	92
72)	n-butylbenzene	17.248	91	777759	16.55	ppb #	89
73)	1,2-Dibromo-3-chloropr...	18.653	157	53502	15.59	ppb	98
74)	1,2,4-Trichlorobenzene	20.138	180	190994	16.14	ppb	96
75)	Hexachlorobutadiene	20.470	225	75549	15.48	ppb	93
76)	Naphthalene	20.575	128	598580	15.49	ppb	88
77)	1,2,3-Trichlorobenzene	21.016	180	174224	16.18	ppb	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

DEC04.M Mon Dec 04 14:39:11 2023

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\04\  
 Data File : 00801008.D  
 Acq On : 4 Dec 2023 1:29 pm  
 Operator : BKP  
 Sample : 20 PPB VOC ICAL  
 Misc :  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Dec 04 14:39:24 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Dec 04 14:33:00 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
<b>Internal Standards</b>							
1) Fluorobenzene	7.649	96	1426406	20.00	ppb	0.00	
38) Chlorobenzene-d5	12.457	117	2190311	20.00	ppb	0.00	
67) 1,4-Dichlorobenzene-d4	16.521	152	1035154	20.00	ppb	0.00	
<b>System Monitoring Compounds</b>							
2) 1,2-Dichloroethane-d4	7.152	65	489956	19.51	ppb	0.00	
Spiked Amount	20.000	Range 85 - 115	Recovery	=	97.55%		
24) Dibromofluoromethane	6.659	111	392428	20.17	ppb	0.00	
Spiked Amount	20.000		Recovery	=	100.85%		
32) Toluene-d8	10.104	98	1900462	20.08	ppb	0.00	
Spiked Amount	20.000		Recovery	=	100.40%		
54) Bromofluorobenzene	14.487	95	1306225	20.08	ppb	0.00	
Spiked Amount	20.000		Recovery	=	100.40%		
68) 1,2-Dichlorobenzene-d4	17.186	152	876651	19.88	ppb	0.00	
Spiked Amount	20.000		Recovery	=	99.40%		
<b>Target Compounds</b>							
							Qvalue
3) Dichlorodifluoromethane	1.047	85	223645	20.36	ppb		96
4) Chloromethane	1.254	50	497407	20.55	ppb		100
5) Vinyl chloride	1.403	62	638746	20.50	ppb		98
6) Bromomethane	1.863	96	193067	18.72	ppb		94
7) Chloroethane	2.016	64	349847	19.82	ppb		99
8) Trichlorofluoromethane	2.382	101	785355	20.74	ppb		96
9) Diethyl ether	2.859	59	778336	20.16	ppb		90
10) 1,1-Dichloroethene	3.171	61	1068022	20.72	ppb		89
11) Acetone	3.338	43	222429	19.79	ppb		85
12) Methyl iodide	3.394	142	474169	20.68	ppb		93
13) Carbon disulfide	3.470	76	1819203	20.01	ppb		100
14) Methylene chloride	3.969	84	597434	19.18	ppb		95
15) MTBE (2-methoxy-2-meth...	4.399	73	2620911	19.70	ppb		91
16) trans-1,2-Dichloroethene	4.374	61	1177968	20.29	ppb	#	75
17) Acrylonitrile	4.444	53	305523	22.55	ppb		97
18) 1,1-Dichloroethane	5.025	63	1494429	20.11	ppb		96
19) Methyl ethyl ketone	6.015	43	483457	20.96	ppb		88
20) 2,2-Dichloropropane	5.890	77	1067837	20.50	ppb		99
21) cis-1,2-Dichloroethene	5.917	96	732134	20.34	ppb		95
22) Bromochloromethane	6.275	130	390870	19.88	ppb		98
23) Chloroform	6.415	83	1238948	19.86	ppb		94
25) 1,1,1-Trichloroethane	6.641	97	1001822	20.27	ppb		81
26) 1,1-Dichloropropene	6.895	75	1125757	20.71	ppb		74
27) Carbon tetrachloride	6.878	117	765885	21.30	ppb		99
28) Benzene	7.206	78	3372846	20.04	ppb		100
29) 1,2-Dichloroethane	7.266	62	1129909	19.88	ppb		96
30) Trichloroethene	8.201	130	666084	19.93	ppb	#	82
31) 1,2-Dichloropropane	8.552	63	932327	19.89	ppb		97
33) Dibromomethane	8.742	174	373071	20.08	ppb	#	31
34) Bromodichloromethane	8.999	83	930476	20.00	ppb		94
35) cis-1,3-Dichloropropene	9.707	75	1333507	20.71	ppb		77
36) Methyl isobutyl ketone	9.992	43	1181114	20.76	ppb		91

37)	Toluene	10.208	91	3040453	20.22	ppb	98
39)	trans-1,3-Dichloropropene	10.616	75	1188487	20.92	ppb	79
40)	1,1,2-Trichloroethane	10.896	97	655058	19.93	ppb	87
41)	Tetrachloroethene	11.070	166	584461	19.24	ppb	90
42)	2-Hexanone	11.361	43	743079	20.69	ppb	84
43)	1,3-Dichloropropane	11.160	76	1312578	20.08	ppb	99
44)	Dibromochloromethane	11.517	129	573565	20.35	ppb	96
45)	1,2-Dibromoethane	11.684	107	607123	20.36	ppb	97
46)	Chlorobenzene	12.503	112	1529444	19.88	ppb #	78
47)	1,1,1,2-Tetrachloroethane	12.658	131	505461	20.02	ppb	96
48)	Ethylbenzene	12.708	91	2802225	20.73	ppb	90
49)	m+p-Xylene	12.912	91	4110185	42.06	ppb	88
50)	o-Xylene	13.582	91	2004392	21.27	ppb	88
51)	Styrene	13.616	104	1525208	21.10	ppb	78
52)	Bromoform	13.916	173	291580	20.92	ppb	94
53)	Isopropylbenzene	14.232	105	1991603	21.66	ppb	96
55)	Bromobenzene	14.723	156	442881	20.14	ppb #	43
56)	n-Propylbenzene	14.952	91	2354197	21.28	ppb #	86
57)	1,3,5-Trimethylbenzene	15.280	105	1331447	21.48	ppb	93
58)	2-Chlorotoluene	15.075	91	1344355	20.78	ppb #	79
59)	4-Chlorotoluene	15.276	91	1530029	20.97	ppb #	80
60)	tert-Butylbenzene	15.842	91	739215	21.54	ppb #	73
61)	1,1,2,2-Tetrachloroethane	14.801	83	682483	20.13	ppb	93
62)	trans-1,4-Dichloro-2-b...	14.914	53	241634	20.88	ppb	92
63)	1,2,3-Trichloropropane	14.851	110	195761	19.94	ppb	95
64)	1,2,4-Trimethylbenzene	15.933	105	1305164	21.92	ppb	92
65)	sec-Butylbenzene	16.235	105	1529469	21.92	ppb #	91
66)	4-Isopropyltoluene	16.513	119	1171421	21.37	ppb #	93
69)	1,3-Dichlorobenzene	16.398	146	640618	20.38	ppb	93
70)	1,4-Dichlorobenzene	16.562	146	664048	20.14	ppb	95
71)	1,2-Dichlorobenzene	17.219	146	577619	19.89	ppb	91
72)	n-butylbenzene	17.248	91	1019530	21.28	ppb #	89
73)	1,2-Dibromo-3-chloropr...	18.652	157	69722	20.15	ppb	91
74)	1,2,4-Trichlorobenzene	20.137	180	254718	21.11	ppb	97
75)	Hexachlorobutadiene	20.470	225	99410	19.98	ppb	97
76)	Naphthalene	20.575	128	799170	20.20	ppb	87
77)	1,2,3-Trichlorobenzene	21.017	180	231400	21.07	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

DEC04.M Mon Dec 04 14:39:25 2023

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\04\  
 Data File : 00901009.D  
 Acq On : 4 Dec 2023 1:58 pm  
 Operator : BKP  
 Sample : 30 PPB VOC ICAL  
 Misc :  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Dec 04 14:40:18 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Dec 04 14:33:00 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
<b>Internal Standards</b>							
1) Fluorobenzene	7.652	96	1441662	20.00	ppb	0.00	
38) Chlorobenzene-d5	12.458	117	2188517	20.00	ppb	0.00	
67) 1,4-Dichlorobenzene-d4	16.521	152	1028008	20.00	ppb	0.00	
<b>System Monitoring Compounds</b>							
2) 1,2-Dichloroethane-d4	7.155	65	489382	19.28	ppb	0.00	
Spiked Amount	20.000	Range 85 - 115	Recovery	=	96.40%		
24) Dibromofluoromethane	6.663	111	389987	19.83	ppb	0.00	
Spiked Amount	20.000		Recovery	=	99.15%		
32) Toluene-d8	10.105	98	1904663	19.92	ppb	0.00	
Spiked Amount	20.000		Recovery	=	99.60%		
54) Bromofluorobenzene	14.488	95	1292423	19.89	ppb	0.00	
Spiked Amount	20.000		Recovery	=	99.45%		
68) 1,2-Dichlorobenzene-d4	17.187	152	869146	19.84	ppb	0.00	
Spiked Amount	20.000		Recovery	=	99.20%		
<b>Target Compounds</b>							
							Qvalue
3) Dichlorodifluoromethane	1.057	85	292609	28.96	ppb		100
4) Chloromethane	1.264	50	678842	27.75	ppb		100
5) Vinyl chloride	1.416	62	847723	26.92	ppb		97
6) Bromomethane	1.870	96	245896	29.67	ppb		95
7) Chloroethane	2.025	64	460114	29.30	ppb		97
8) Trichlorofluoromethane	2.391	101	1022390	26.71	ppb		96
9) Diethyl ether	2.868	59	1061196	27.19	ppb		91
10) 1,1-Dichloroethene	3.178	61	1425992	27.37	ppb		90
11) Acetone	3.345	43	309410	27.85	ppb		80
12) Methyl iodide	3.408	142	645963m	29.07	ppb		
13) Carbon disulfide	3.477	76	2431127	26.46	ppb		100
14) Methylene chloride	3.975	84	810779	25.75	ppb		93
15) MTBE (2-methoxy-2-meth...	4.406	73	3560111	26.47	ppb		90
16) trans-1,2-Dichloroethene	4.380	61	1598612	27.25	ppb	#	74
17) Acrylonitrile	4.444	53	424935	31.03	ppb		92
18) 1,1-Dichloroethane	5.031	63	2033830	27.08	ppb		96
19) Methyl ethyl ketone	6.016	43	682161	28.94	ppb		90
20) 2,2-Dichloropropane	5.894	77	1438632	27.32	ppb		98
21) cis-1,2-Dichloroethene	5.922	96	1007526	27.70	ppb		96
22) Bromochloromethane	6.279	130	518134	26.07	ppb		99
23) Chloroform	6.419	83	1680428	26.65	ppb		95
25) 1,1,1-Trichloroethane	6.645	97	1348556	27.00	ppb		83
26) 1,1-Dichloropropene	6.899	75	1496911	27.25	ppb		74
27) Carbon tetrachloride	6.882	117	1019948	28.07	ppb		96
28) Benzene	7.210	78	4554835	26.77	ppb		99
29) 1,2-Dichloroethane	7.268	62	1530398	26.64	ppb		96
30) Trichloroethene	8.204	130	900325	26.65	ppb	#	84
31) 1,2-Dichloropropane	8.554	63	1259481	26.59	ppb		96
33) Dibromomethane	8.743	174	510190	27.17	ppb	#	31
34) Bromodichloromethane	9.001	83	1259913	26.79	ppb		93
35) cis-1,3-Dichloropropene	9.708	75	1806811	29.24	ppb		76
36) Methyl isobutyl ketone	9.992	43	1618467	28.91	ppb		91

37)	Toluene	10.209	91	4114416	27.07	ppb	99
39)	trans-1,3-Dichloropropene	10.616	75	1615938	29.04	ppb	78
40)	1,1,2-Trichloroethane	10.897	97	878892	26.76	ppb #	87
41)	Tetrachloroethene	11.071	166	778423	25.65	ppb #	89
42)	2-Hexanone	11.360	43	1023540	28.84	ppb	86
43)	1,3-Dichloropropane	11.161	76	1761036	26.96	ppb	100
44)	Dibromochloromethane	11.517	129	772504	27.43	ppb	97
45)	1,2-Dibromoethane	11.684	107	820807	27.54	ppb	100
46)	Chlorobenzene	12.504	112	2070617	26.93	ppb #	77
47)	1,1,1,2-Tetrachloroethane	12.658	131	691838	27.43	ppb	98
48)	Ethylbenzene	12.708	91	3795850	28.11	ppb	90
49)	m+p-Xylene	12.912	91	5531730	56.65	ppb	87
50)	o-Xylene	13.582	91	2700359	28.68	ppb	87
51)	Styrene	13.617	104	1993792	28.98	ppb	79
52)	Bromoform	13.917	173	391522	28.12	ppb	98
53)	Isopropylbenzene	14.233	105	2677807	29.15	ppb	97
55)	Bromobenzene	14.723	156	599867	27.31	ppb #	41
56)	n-Propylbenzene	14.953	91	3140460	28.41	ppb #	86
57)	1,3,5-Trimethylbenzene	15.280	105	1777089	28.70	ppb	94
58)	2-Chlorotoluene	15.075	91	1809534	28.00	ppb #	78
59)	4-Chlorotoluene	15.276	91	2045523	28.06	ppb #	79
60)	tert-Butylbenzene	15.842	91	978441	28.54	ppb #	72
61)	1,1,2,2-Tetrachloroethane	14.801	83	903374	26.66	ppb	91
62)	trans-1,4-Dichloro-2-b...	14.913	53	332243	28.98	ppb	98
63)	1,2,3-Trichloropropane	14.851	110	263420	26.85	ppb	93
64)	1,2,4-Trimethylbenzene	15.934	105	1745409	29.34	ppb	92
65)	sec-Butylbenzene	16.235	105	2019324	28.96	ppb #	89
66)	4-Isopropyltoluene	16.513	119	1554257	28.38	ppb #	92
69)	1,3-Dichlorobenzene	16.398	146	862667	27.64	ppb	94
70)	1,4-Dichlorobenzene	16.562	146	877311	26.79	ppb	95
71)	1,2-Dichlorobenzene	17.220	146	766381	26.58	ppb	92
72)	n-butylbenzene	17.248	91	1344240	28.25	ppb #	89
73)	1,2-Dibromo-3-chloropr...	18.653	157	99385	29.67	ppb	92
74)	1,2,4-Trichlorobenzene	20.137	180	364190	30.39	ppb	97
75)	Hexachlorobutadiene	20.471	225	128698	26.04	ppb	97
76)	Naphthalene	20.574	128	1210863	30.67	ppb	87
77)	1,2,3-Trichlorobenzene	21.016	180	322004	29.52	ppb	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

DEC04.M Mon Dec 04 14:40:29 2023

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\04\  
 Data File : 01101011.D  
 Acq On : 4 Dec 2023 2:57 pm  
 Operator : BKP  
 Sample : 10 PPB VOC ICV  
 Misc :  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Dec 04 15:52:16 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Dec 04 14:33:00 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev (Min)	
<b>Internal Standards</b>							
1) Fluorobenzene	7.652	96	1424542	20.00	ppb	0.00	
38) Chlorobenzene-d5	12.458	117	2217838	20.00	ppb	0.00	
67) 1,4-Dichlorobenzene-d4	16.522	152	1044771	20.00	ppb	0.00	
<b>System Monitoring Compounds</b>							
2) 1,2-Dichloroethane-d4	7.156	65	491216	19.58	ppb	0.00	
Spiked Amount	20.000	Range 85 - 115	Recovery	=	97.90%		
24) Dibromofluoromethane	6.664	111	386714	19.90	ppb	0.00	
Spiked Amount	20.000		Recovery	=	99.50%		
32) Toluene-d8	10.106	98	1904558	20.15	ppb	0.00	
Spiked Amount	20.000		Recovery	=	100.75%		
54) Bromofluorobenzene	14.488	95	1319544	20.04	ppb	0.00	
Spiked Amount	20.000		Recovery	=	100.20%		
68) 1,2-Dichlorobenzene-d4	17.187	152	887178	19.93	ppb	0.00	
Spiked Amount	20.000		Recovery	=	99.65%		
<b>Target Compounds</b>							
							Qvalue
3) Dichlorodifluoromethane	1.057	85	120430	10.00	ppb		98
4) Chloromethane	1.267	50	254087	10.51	ppb		100
5) Vinyl chloride	1.416	62	333162	10.71	ppb		100
6) Bromomethane	1.876	96	126547	10.71	ppb		95
7) Chloroethane	2.032	64	198918	10.09	ppb		98
8) Trichlorofluoromethane	2.398	101	417015	11.03	ppb		97
9) Diethyl ether	2.871	59	399824	10.37	ppb		90
10) 1,1-Dichloroethene	3.185	61	545834	10.60	ppb		90
11) Acetone	3.352	43	124787	10.40	ppb		84
12) Methyl iodide	3.408	142	234134m	9.70	ppb		
13) Carbon disulfide	3.477	76	957378	10.54	ppb		100
14) Methylene chloride	3.979	84	313805	10.09	ppb		93
15) MTBE (2-methoxy-2-meth...	4.407	73	1341297	10.09	ppb		91
16) trans-1,2-Dichloroethene	4.384	61	602694	10.40	ppb	#	74
17) Acrylonitrile	4.465	53	140943	10.42	ppb		83
18) 1,1-Dichloroethane	5.033	63	769368	10.37	ppb		95
19) Methyl ethyl ketone	6.028	43	219769	9.70	ppb		90
20) 2,2-Dichloropropane	5.895	77	542017	10.42	ppb		99
21) cis-1,2-Dichloroethene	5.927	96	376297	10.47	ppb		97
22) Bromochloromethane	6.281	130	206458	10.51	ppb		98
23) Chloroform	6.420	83	636840	10.22	ppb		94
25) 1,1,1-Trichloroethane	6.645	97	518113	10.50	ppb		82
26) 1,1-Dichloropropene	6.900	75	582895	10.74	ppb		75
27) Carbon tetrachloride	6.882	117	387637	10.80	ppb		97
28) Benzene	7.211	78	1744132	10.37	ppb		99
29) 1,2-Dichloroethane	7.272	62	578195	10.19	ppb		97
30) Trichloroethene	8.205	130	349889	10.48	ppb	#	86
31) 1,2-Dichloropropane	8.555	63	477338	10.20	ppb		97
33) Dibromomethane	8.747	174	192419	10.37	ppb	#	39
34) Bromodichloromethane	9.002	83	473151	10.18	ppb		93
35) cis-1,3-Dichloropropene	9.711	75	665611	9.79	ppb		78
36) Methyl isobutyl ketone	9.995	43	583585	9.92	ppb		90

37)	Toluene	10.210	91	1555145	10.35	ppb	100
39)	trans-1,3-Dichloropropene	10.620	75	578201	9.79	ppb	79
40)	1,1,2-Trichloroethane	10.898	97	334037	10.03	ppb #	85
41)	Tetrachloroethene	11.071	166	310190	10.09	ppb	87
42)	2-Hexanone	11.368	43	367065	9.96	ppb	84
43)	1,3-Dichloropropane	11.163	76	666047	10.06	ppb	99
44)	Dibromochloromethane	11.518	129	288689	10.12	ppb	99
45)	1,2-Dibromoethane	11.686	107	307505	10.18	ppb	99
46)	Chlorobenzene	12.505	112	798935	10.25	ppb #	78
47)	1,1,1,2-Tetrachloroethane	12.658	131	258425	10.11	ppb	96
48)	Ethylbenzene	12.709	91	1424407	10.41	ppb	91
49)	m+p-Xylene	12.913	91	2097523	21.20	ppb	88
50)	o-Xylene	13.583	91	1011758	10.60	ppb	88
51)	Styrene	13.619	104	764917	9.89	ppb	79
52)	Bromoform	13.917	173	143700	10.18	ppb	97
53)	Isopropylbenzene	14.233	105	1010475	10.85	ppb	95
55)	Bromobenzene	14.725	156	229574	10.31	ppb #	38
56)	n-Propylbenzene	14.954	91	1209881	10.80	ppb #	88
57)	1,3,5-Trimethylbenzene	15.280	105	688223	10.97	ppb	94
58)	2-Chlorotoluene	15.076	91	694566	10.60	ppb #	78
59)	4-Chlorotoluene	15.278	91	784186	10.61	ppb #	80
60)	tert-Butylbenzene	15.842	91	378285	10.89	ppb #	74
61)	1,1,2,2-Tetrachloroethane	14.802	83	348255	10.14	ppb	92
62)	trans-1,4-Dichloro-2-b...	14.918	53	117505	9.91	ppb	99
63)	1,2,3-Trichloropropane	14.852	110	102289	10.29	ppb	93
64)	1,2,4-Trimethylbenzene	15.934	105	659881	10.95	ppb	92
65)	sec-Butylbenzene	16.235	105	779734	11.04	ppb #	89
66)	4-Isopropyltoluene	16.513	119	606817	10.93	ppb #	91
69)	1,3-Dichlorobenzene	16.399	146	329456	10.39	ppb	93
70)	1,4-Dichlorobenzene	16.563	146	340061	10.22	ppb	92
71)	1,2-Dichlorobenzene	17.220	146	297297	10.15	ppb	93
72)	n-butylbenzene	17.248	91	528413	10.93	ppb #	88
73)	1,2-Dibromo-3-chloropr...	18.653	157	35785	10.02	ppb	93
74)	1,2,4-Trichlorobenzene	20.138	180	124874	10.25	ppb	96
75)	Hexachlorobutadiene	20.470	225	52654	10.48	ppb	97
76)	Naphthalene	20.576	128	379918	9.66	ppb	85
77)	1,2,3-Trichlorobenzene	21.017	180	116720	10.53	ppb	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

DEC04.M Mon Dec 04 16:01:03 2023

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\04\  
 Data File : 01201012.D  
 Acq On : 4 Dec 2023 3:26 pm  
 Operator : BKP  
 Sample : 2 PPB VOC CCV  
 Misc :  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Dec 04 16:02:09 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Dec 04 14:33:00 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) Fluorobenzene	7.649	96	1385124	20.00	ppb	0.00	
38) Chlorobenzene-d5	12.457	117	2165596	20.00	ppb	0.00	
67) 1,4-Dichlorobenzene-d4	16.522	152	1009115	20.00	ppb	0.00	
System Monitoring Compounds							
2) 1,2-Dichloroethane-d4	7.157	65	488447	20.03	ppb	0.00	
Spiked Amount	20.000	Range 85 - 115	Recovery	=	100.15%		
24) Dibromofluoromethane	6.661	111	371235	19.65	ppb	0.00	
Spiked Amount	20.000		Recovery	=	98.25%		
32) Toluene-d8	10.105	98	1847865	20.11	ppb	0.00	
Spiked Amount	20.000		Recovery	=	100.55%		
54) Bromofluorobenzene	14.488	95	1293120	20.11	ppb	0.00	
Spiked Amount	20.000		Recovery	=	100.55%		
68) 1,2-Dichlorobenzene-d4	17.187	152	866355	20.15	ppb	0.00	
Spiked Amount	20.000		Recovery	=	100.75%		
Target Compounds							
							Qvalue
3) Dichlorodifluoromethane	1.050	85	16742	1.53	ppb		94
4) Chloromethane	1.261	50	46460	1.98	ppb		98
5) Vinyl chloride	1.410	62	52534	1.74	ppb		98
6) Bromomethane	1.867	96	20081	1.59	ppb		95
7) Chloroethane	2.019	64	31056	1.59	ppb		96
8) Trichlorofluoromethane	2.385	101	58984	1.60	ppb		98
9) Diethyl ether	2.868	59	70982	1.89	ppb		92
10) 1,1-Dichloroethene	3.178	61	85590	1.71	ppb		93
11) Acetone	3.366	43	33374	1.67	ppb		77
12) Methyl iodide	3.401	142	38640	1.59	ppb		93
13) Carbon disulfide	3.470	76	154456	1.75	ppb	100	
14) Methylene chloride	3.975	84	58584	1.94	ppb		92
15) MTBE (2-methoxy-2-meth...	4.408	73	260659	2.02	ppb		88
16) trans-1,2-Dichloroethene	4.381	61	100987	1.79	ppb	#	76
17) Acrylonitrile	4.541	53	20622m	1.57	ppb		
18) 1,1-Dichloroethane	5.031	63	135029	1.87	ppb		97
19) Methyl ethyl ketone	6.048	43	25254	1.16	ppb		82
20) 2,2-Dichloropropane	5.892	77	88157	1.74	ppb		100
21) cis-1,2-Dichloroethene	5.930	96	66324	1.90	ppb		99
22) Bromochloromethane	6.284	130	35892	1.88	ppb		100
23) Chloroform	6.419	83	117723	1.94	ppb		94
25) 1,1,1-Trichloroethane	6.642	97	84465	1.76	ppb		81
26) 1,1-Dichloropropene	6.898	75	91700	1.74	ppb		71
27) Carbon tetrachloride	6.879	117	56402	1.62	ppb		99
28) Benzene	7.209	78	309429	1.89	ppb		98
29) 1,2-Dichloroethane	7.276	62	110216	2.00	ppb		98
30) Trichloroethene	8.205	130	62711	1.93	ppb	#	86
31) 1,2-Dichloropropane	8.556	63	88533	1.95	ppb		96
33) Dibromomethane	8.752	174	36956	2.05	ppb	#	45
34) Bromodichloromethane	9.001	83	86139	1.91	ppb		95
35) cis-1,3-Dichloropropene	9.718	75	117633	1.85	ppb		79
36) Methyl isobutyl ketone	10.001	43	95095	1.62	ppb		93

37)	Toluene	10.210	91	283269	1.94	ppb	99
39)	trans-1,3-Dichloropropene	10.627	75	98967	1.68	ppb	85
40)	1,1,2-Trichloroethane	10.900	97	63909	1.97	ppb #	85
41)	Tetrachloroethene	11.071	166	55926	1.86	ppb #	81
42)	2-Hexanone	11.389	43	52916	1.45	ppb	92
43)	1,3-Dichloropropane	11.167	76	127057	1.97	ppb	100
44)	Dibromochloromethane	11.519	129	52613	1.89	ppb	99
45)	1,2-Dibromoethane	11.692	107	57866	1.96	ppb	96
46)	Chlorobenzene	12.504	112	151361	1.99	ppb #	79
47)	1,1,1,2-Tetrachloroethane	12.658	131	48188	1.93	ppb	100
48)	Ethylbenzene	12.711	91	253627	1.90	ppb	92
49)	m+p-Xylene	12.914	91	368672	3.82	ppb	86
50)	o-Xylene	13.584	91	177608	1.91	ppb	85
51)	Styrene	13.621	104	128011	1.83	ppb	76
52)	Bromoform	13.919	173	25868	1.88	ppb	100
53)	Isopropylbenzene	14.233	105	168438	1.85	ppb	93
55)	Bromobenzene	14.726	156	42393	1.95	ppb #	48
56)	n-Propylbenzene	14.955	91	202093	1.85	ppb #	85
57)	1,3,5-Trimethylbenzene	15.282	105	116023	1.89	ppb	90
58)	2-Chlorotoluene	15.077	91	125198	1.96	ppb #	83
59)	4-Chlorotoluene	15.282	91	140588	1.95	ppb #	78
60)	tert-Butylbenzene	15.842	91	61834	1.82	ppb #	78
61)	1,1,2,2-Tetrachloroethane	14.804	83	67066	2.00	ppb	94
62)	trans-1,4-Dichloro-2-b...	14.928	53	20563	1.76	ppb	79
63)	1,2,3-Trichloropropane	14.855	110	20152	2.08	ppb	98
64)	1,2,4-Trimethylbenzene	15.936	105	109996	1.87	ppb	92
65)	sec-Butylbenzene	16.235	105	123404	1.79	ppb #	90
66)	4-Isopropyltoluene	16.514	119	103716	1.91	ppb #	88
69)	1,3-Dichlorobenzene	16.401	146	61513	2.01	ppb	93
70)	1,4-Dichlorobenzene	16.563	146	66824	2.08	ppb	95
71)	1,2-Dichlorobenzene	17.220	146	58353	2.06	ppb	92
72)	n-butylbenzene	17.250	91	85637	1.83	ppb #	89
73)	1,2-Dibromo-3-chloropr...	18.655	157	6378	1.91	ppb	80
74)	1,2,4-Trichlorobenzene	20.140	180	22682	1.93	ppb	85
75)	Hexachlorobutadiene	20.470	225	9890	2.04	ppb	98
76)	Naphthalene	20.578	128	62328	1.87	ppb	89
77)	1,2,3-Trichlorobenzene	21.018	180	21538	2.01	ppb	84

(#) = qualifier out of range (m) = manual integration (+) = signals summed

DEC04.M Mon Dec 04 16:03:37 2023

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\04\  
 Data File : 01401014.D  
 Acq On : 4 Dec 2023 4:25 pm  
 Operator : BKP  
 Sample : MDK0735-04  
 Misc :  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Dec 05 12:57:43 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Dec 04 14:33:00 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) Fluorobenzene	7.649	96	1364355	20.00	ppb	0.00
38) Chlorobenzene-d5	12.458	117	2154257	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.522	152	979759	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.156	65	493855	20.56	ppb	0.00
Spiked Amount 20.000	Range 85 - 115		Recovery =	102.80%		
24) Dibromofluoromethane	6.660	111	373461	20.07	ppb	0.00
Spiked Amount 20.000			Recovery =	100.35%		
32) Toluene-d8	10.105	98	1798564	19.87	ppb	0.00
Spiked Amount 20.000			Recovery =	99.35%		
54) Bromofluorobenzene	14.489	95	1274113	19.92	ppb	0.00
Spiked Amount 20.000			Recovery =	99.60%		
68) 1,2-Dichlorobenzene-d4	17.187	152	852029	20.41	ppb	0.00
Spiked Amount 20.000			Recovery =	102.05%		
Target Compounds						
11) Acetone	3.387	43	8164	Below Cal		Qvalue 61
-----						

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\04\  
 Data File : 01501015.D  
 Acq On : 4 Dec 2023 4:54 pm  
 Operator : BKP  
 Sample : MDK0735-01  
 Misc :  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: Dec 05 12:57:56 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Dec 04 14:33:00 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) Fluorobenzene	7.651	96	1348572	20.00	ppb	0.00
38) Chlorobenzene-d5	12.458	117	2149902	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.523	152	980705	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.158	65	488539	20.57	ppb	0.00
Spiked Amount 20.000	Range 85 - 115		Recovery =	102.85%		
24) Dibromofluoromethane	6.666	111	376412	20.46	ppb	0.00
Spiked Amount 20.000			Recovery =	102.30%		
32) Toluene-d8	10.107	98	1768864	19.77	ppb	0.00
Spiked Amount 20.000			Recovery =	98.85%		
54) Bromofluorobenzene	14.489	95	1263684	19.80	ppb	0.00
Spiked Amount 20.000			Recovery =	99.00%		
68) 1,2-Dichlorobenzene-d4	17.188	152	859585	20.57	ppb	0.00
Spiked Amount 20.000			Recovery =	102.85%		
Target Compounds						
11) Acetone	3.387	43	15256	Below Cal		80
14) Methylene chloride	3.984	84	14263	0.48 ppb		96
-----						

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\04\  
 Data File : 01601016.D  
 Acq On : 4 Dec 2023 5:24 pm  
 Operator : BKP  
 Sample : MDK0735-02  
 Misc :  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: Dec 05 12:58:14 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Dec 04 14:33:00 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) Fluorobenzene	7.653	96	1346485	20.00	ppb	0.00
38) Chlorobenzene-d5	12.459	117	2142762	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.523	152	970845	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.161	65	490345	20.68	ppb	0.01
Spiked Amount 20.000	Range 85 - 115		Recovery	= 103.40%		
24) Dibromofluoromethane	6.669	111	383975	20.90	ppb	0.01
Spiked Amount 20.000			Recovery	= 104.50%		
32) Toluene-d8	10.107	98	1772810	19.85	ppb	0.00
Spiked Amount 20.000			Recovery	= 99.25%		
54) Bromofluorobenzene	14.489	95	1254077	19.71	ppb	0.00
Spiked Amount 20.000			Recovery	= 98.55%		
68) 1,2-Dichlorobenzene-d4	17.187	152	848400	20.51	ppb	0.00
Spiked Amount 20.000			Recovery	= 102.55%		
Target Compounds						Qvalue
14) Methylene chloride	3.985	84	15142	0.51	ppb	97
-----						

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\04\  
 Data File : 01701017.D  
 Acq On : 4 Dec 2023 5:53 pm  
 Operator : BKP  
 Sample : MDK0735-03  
 Misc :  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: Dec 05 12:58:36 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Dec 04 14:33:00 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	7.652	96	1320189	20.00	ppb	0.00
38) Chlorobenzene-d5	12.459	117	2095822	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.523	152	939523	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.160	65	486545	20.93	ppb	0.01
Spiked Amount	20.000	Range 85 - 115	Recovery	=	104.65%	
24) Dibromofluoromethane	6.666	111	376619	20.91	ppb	0.00
Spiked Amount	20.000		Recovery	=	104.55%	
32) Toluene-d8	10.107	98	1735287	19.81	ppb	0.00
Spiked Amount	20.000		Recovery	=	99.05%	
54) Bromofluorobenzene	14.490	95	1224424	19.68	ppb	0.00
Spiked Amount	20.000		Recovery	=	98.40%	
68) 1,2-Dichlorobenzene-d4	17.188	152	827155	20.66	ppb	0.00
Spiked Amount	20.000		Recovery	=	103.30%	
Target Compounds						
11) Acetone	3.366	43	28484	1.32	ppb	Qvalue 89

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\04\  
 Data File : 01801018.D  
 Acq On : 4 Dec 2023 6:22 pm  
 Operator : BKP  
 Sample : MDK0735-05  
 Misc :  
 ALS Vial : 18 Sample Multiplier: 1

Quant Time: Dec 05 12:59:05 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Dec 04 14:33:00 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	7.653	96	1302923	20.00	ppb	0.00
38) Chlorobenzene-d5	12.459	117	2083805	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.523	152	946406	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.160	65	478334	20.85	ppb	0.01
Spiked Amount 20.000	Range 85 - 115		Recovery =	104.25%		
24) Dibromofluoromethane	6.667	111	374197	21.05	ppb	0.01
Spiked Amount 20.000			Recovery =	105.25%		
32) Toluene-d8	10.108	98	1721348	19.92	ppb	0.00
Spiked Amount 20.000			Recovery =	99.60%		
54) Bromofluorobenzene	14.490	95	1223742	19.78	ppb	0.00
Spiked Amount 20.000			Recovery =	98.90%		
68) 1,2-Dichlorobenzene-d4	17.188	152	834072	20.68	ppb	0.00
Spiked Amount 20.000			Recovery =	103.40%		
Target Compounds						Qvalue
14) Methylene chloride	3.987	84	14913	0.52	ppb	89

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\04\  
 Data File : 01901019.D  
 Acq On : 4 Dec 2023 6:51 pm  
 Operator : BKP  
 Sample : MDK0735-06  
 Misc :  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: Dec 05 12:59:38 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Dec 04 14:33:00 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) Fluorobenzene	7.651	96	1318573	20.00	ppb	0.00
38) Chlorobenzene-d5	12.459	117	2119747	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.523	152	961609	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.158	65	486300	20.95	ppb	0.00
Spiked Amount 20.000	Range 85 - 115		Recovery =	104.75%		
24) Dibromofluoromethane	6.664	111	376692	20.94	ppb	0.00
Spiked Amount 20.000			Recovery =	104.70%		
32) Toluene-d8	10.107	98	1742808	19.92	ppb	0.00
Spiked Amount 20.000			Recovery =	99.60%		
54) Bromofluorobenzene	14.490	95	1242119	19.73	ppb	0.00
Spiked Amount 20.000			Recovery =	98.65%		
68) 1,2-Dichlorobenzene-d4	17.188	152	839212	20.48	ppb	0.00
Spiked Amount 20.000			Recovery =	102.40%		
Target Compounds						
11) Acetone	3.387	43	23619	0.82	ppb	90
-----						

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\04\  
 Data File : 02001020.D  
 Acq On : 4 Dec 2023 7:20 pm  
 Operator : BKP  
 Sample : MDK0735-07  
 Misc :  
 ALS Vial : 20 Sample Multiplier: 1

Quant Time: Dec 05 13:00:32 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Dec 04 14:33:00 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) Fluorobenzene	7.653	96	1308488	20.00	ppb	0.00
38) Chlorobenzene-d5	12.460	117	2078500	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.524	152	947004	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.161	65	487735	21.17	ppb	0.01
Spiked Amount	20.000	Range 85 - 115	Recovery	=	105.85%	
24) Dibromofluoromethane	6.666	111	373235	20.91	ppb	0.00
Spiked Amount	20.000		Recovery	=	104.55%	
32) Toluene-d8	10.108	98	1720002	19.82	ppb	0.00
Spiked Amount	20.000		Recovery	=	99.10%	
54) Bromofluorobenzene	14.490	95	1216616	19.71	ppb	0.00
Spiked Amount	20.000		Recovery	=	98.55%	
68) 1,2-Dichlorobenzene-d4	17.188	152	830228	20.58	ppb	0.00
Spiked Amount	20.000		Recovery	=	102.90%	

Target Compounds Qvalue

-----

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\04\  
 Data File : 02101021.D  
 Acq On : 4 Dec 2023 7:50 pm  
 Operator : BKP  
 Sample : MDK0735-08  
 Misc :  
 ALS Vial : 21 Sample Multiplier: 1

Quant Time: Dec 05 13:00:53 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Dec 04 14:33:00 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	7.651	96	1306352	20.00	ppb	0.00
38) Chlorobenzene-d5	12.459	117	2127463	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.523	152	962428	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.158	65	481626	20.94	ppb	0.00
Spiked Amount	20.000	Range 85 - 115	Recovery	=	104.70%	
24) Dibromofluoromethane	6.662	111	371642	20.85	ppb	0.00
Spiked Amount	20.000		Recovery	=	104.25%	
32) Toluene-d8	10.107	98	1729067	19.95	ppb	0.00
Spiked Amount	20.000		Recovery	=	99.75%	
54) Bromofluorobenzene	14.489	95	1249351	19.78	ppb	0.00
Spiked Amount	20.000		Recovery	=	98.90%	
68) 1,2-Dichlorobenzene-d4	17.188	152	843504	20.57	ppb	0.00
Spiked Amount	20.000		Recovery	=	102.85%	
Target Compounds						
11) Acetone	3.387	43	12232	Below Cal		Qvalue 80

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\04\  
 Data File : 02201022.D  
 Acq On : 4 Dec 2023 8:19 pm  
 Operator : BKP  
 Sample : MDK0735-09  
 Misc :  
 ALS Vial : 22 Sample Multiplier: 1

Quant Time: Dec 05 13:01:22 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Dec 04 14:33:00 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) Fluorobenzene	7.651	96	1318533	20.00	ppb	0.00
38) Chlorobenzene-d5	12.458	117	2132420	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.522	152	968147	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.158	65	485478	20.91	ppb	0.00
Spiked Amount 20.000	Range 85 - 115		Recovery	=	104.55%	
24) Dibromofluoromethane	6.665	111	377760	21.00	ppb	0.00
Spiked Amount 20.000			Recovery	=	105.00%	
32) Toluene-d8	10.107	98	1743370	19.93	ppb	0.00
Spiked Amount 20.000			Recovery	=	99.65%	
54) Bromofluorobenzene	14.489	95	1239581	19.58	ppb	0.00
Spiked Amount 20.000			Recovery	=	97.90%	
68) 1,2-Dichlorobenzene-d4	17.187	152	850358	20.61	ppb	0.00
Spiked Amount 20.000			Recovery	=	103.05%	
Target Compounds						
11) Acetone	3.401	43	5778	Below Cal		Qvalue 83
-----						

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\04\  
 Data File : 02301023.D  
 Acq On : 4 Dec 2023 8:48 pm  
 Operator : BKP  
 Sample : MDK0735-10  
 Misc :  
 ALS Vial : 23 Sample Multiplier: 1

Quant Time: Dec 05 13:02:15 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Dec 04 14:33:00 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	7.654	96	1326056	20.00	ppb	0.00
38) Chlorobenzene-d5	12.460	117	2117391	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.523	152	945893	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.161	65	486056	20.82	ppb	0.01
Spiked Amount 20.000	Range 85 - 115		Recovery	= 104.10%		
24) Dibromofluoromethane	6.667	111	378095	20.90	ppb	0.00
Spiked Amount 20.000			Recovery	= 104.50%		
32) Toluene-d8	10.108	98	1734746	19.72	ppb	0.00
Spiked Amount 20.000			Recovery	= 98.60%		
54) Bromofluorobenzene	14.490	95	1235602	19.65	ppb	0.00
Spiked Amount 20.000			Recovery	= 98.25%		
68) 1,2-Dichlorobenzene-d4	17.188	152	840017	20.84	ppb	0.00
Spiked Amount 20.000			Recovery	= 104.20%		
Target Compounds						Qvalue
19) Methyl ethyl ketone	5.987	43	34962	1.68	ppb	86

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\04\  
 Data File : 02501025.D  
 Acq On : 4 Dec 2023 9:47 pm  
 Operator : BKP  
 Sample : MDK0735-04 MS  
 Misc :  
 ALS Vial : 25 Sample Multiplier: 1

Quant Time: Dec 05 13:03:11 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Dec 04 14:33:00 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev (Min)	
<b>Internal Standards</b>							
1) Fluorobenzene	7.652	96	1354466	20.00	ppb	0.00	
38) Chlorobenzene-d5	12.459	117	2168608	20.00	ppb	0.00	
67) 1,4-Dichlorobenzene-d4	16.522	152	1042094	20.00	ppb	0.00	
<b>System Monitoring Compounds</b>							
2) 1,2-Dichloroethane-d4	7.156	65	475749	19.95	ppb	0.00	
Spiked Amount	20.000	Range 85 - 115	Recovery	=	99.75%		
24) Dibromofluoromethane	6.664	111	382844	20.72	ppb	0.00	
Spiked Amount	20.000		Recovery	=	103.60%		
32) Toluene-d8	10.106	98	1840357	20.48	ppb	0.00	
Spiked Amount	20.000		Recovery	=	102.40%		
54) Bromofluorobenzene	14.489	95	1318269	20.47	ppb	0.00	
Spiked Amount	20.000		Recovery	=	102.35%		
68) 1,2-Dichlorobenzene-d4	17.188	152	878943	19.79	ppb	0.00	
Spiked Amount	20.000		Recovery	=	98.95%		
<b>Target Compounds</b>							
							Qvalue
3) Dichlorodifluoromethane	1.057	85	104162	9.03	ppb		98
4) Chloromethane	1.264	50	229629	9.99	ppb		100
5) Vinyl chloride	1.416	62	301928	10.20	ppb		100
6) Bromomethane	1.883	96	121266	10.81	ppb		99
7) Chloroethane	2.035	64	189129	10.09	ppb		96
8) Trichlorofluoromethane	2.398	101	375245	10.44	ppb		97
9) Diethyl ether	2.870	59	342219	9.33	ppb		89
10) 1,1-Dichloroethene	3.178	61	476296	9.73	ppb		87
11) Acetone	3.352	43	111195	9.64	ppb		84
12) Methyl iodide	3.408	142	207528m	9.01	ppb		
13) Carbon disulfide	3.477	76	874928	10.13	ppb		100
14) Methylene chloride	3.979	84	293863	9.93	ppb		97
15) MTBE (2-methoxy-2-meth...	4.406	73	1163224	9.21	ppb		89
16) trans-1,2-Dichloroethene	4.385	61	532834	9.67	ppb	#	75
17) Acrylonitrile	4.455	53	115200	8.95	ppb		90
18) 1,1-Dichloroethane	5.033	63	679431	9.63	ppb		94
19) Methyl ethyl ketone	6.028	43	194565	9.04	ppb		90
20) 2,2-Dichloropropane	5.896	77	473477	9.57	ppb		97
21) cis-1,2-Dichloroethene	5.927	96	331064	9.69	ppb		99
22) Bromochloromethane	6.283	130	185464	9.93	ppb		99
23) Chloroform	6.420	83	572774	9.67	ppb		96
25) 1,1,1-Trichloroethane	6.646	97	458061	9.76	ppb		81
26) 1,1-Dichloropropene	6.900	75	510094	9.88	ppb		75
27) Carbon tetrachloride	6.882	117	350836	10.28	ppb		99
28) Benzene	7.211	78	1545800	9.67	ppb		99
29) 1,2-Dichloroethane	7.272	62	520155	9.64	ppb		97
30) Trichloroethene	8.205	130	309703	9.76	ppb	#	83
31) 1,2-Dichloropropane	8.556	63	421376	9.47	ppb		97
33) Dibromomethane	8.748	174	171713	9.73	ppb	#	37
34) Bromodichloromethane	9.002	83	422452	9.56	ppb		92
35) cis-1,3-Dichloropropene	9.712	75	568978	8.77	ppb		77
36) Methyl isobutyl ketone	9.996	43	506371	9.02	ppb		90

37)	Toluene	10.210	91	1380568	9.67 ppb	99
39)	trans-1,3-Dichloropropene	10.622	75	499335	8.62 ppb	81
40)	1,1,2-Trichloroethane	10.899	97	300767	9.24 ppb	87
41)	Tetrachloroethene	11.072	166	278099	9.25 ppb #	89
42)	2-Hexanone	11.371	43	318710	8.83 ppb	87
43)	1,3-Dichloropropane	11.164	76	597336	9.23 ppb	100
44)	Dibromochloromethane	11.519	129	252330	9.04 ppb	99
45)	1,2-Dibromoethane	11.688	107	275621	9.33 ppb	99
46)	Chlorobenzene	12.505	112	709289	9.31 ppb #	76
47)	1,1,1,2-Tetrachloroethane	12.659	131	232051	9.28 ppb	100
48)	Ethylbenzene	12.710	91	1257973	9.40 ppb	92
49)	m+p-Xylene	12.914	91	1850952	19.13 ppb	88
50)	o-Xylene	13.584	91	884634	9.48 ppb	89
51)	Styrene	13.619	104	671803	8.85 ppb	80
52)	Bromoform	13.918	173	111884	8.11 ppb	100
53)	Isopropylbenzene	14.234	105	874684	9.61 ppb	97
55)	Bromobenzene	14.725	156	200772	9.22 ppb #	45
56)	n-Propylbenzene	14.955	91	1059148	9.67 ppb #	86
57)	1,3,5-Trimethylbenzene	15.281	105	600323	9.78 ppb	96
58)	2-Chlorotoluene	15.077	91	613534	9.58 ppb #	76
59)	4-Chlorotoluene	15.279	91	695495	9.63 ppb #	79
60)	tert-Butylbenzene	15.843	91	323110	9.51 ppb #	74
61)	1,1,2,2-Tetrachloroethane	14.802	83	316135	9.42 ppb	89
62)	trans-1,4-Dichloro-2-b...	14.919	53	99377	8.56 ppb	97
63)	1,2,3-Trichloropropane	14.852	110	92269	9.49 ppb	95
64)	1,2,4-Trimethylbenzene	15.935	105	578057	9.81 ppb	93
65)	sec-Butylbenzene	16.236	105	674955	9.77 ppb #	90
66)	4-Isopropyltoluene	16.514	119	526440	9.70 ppb #	91
69)	1,3-Dichlorobenzene	16.400	146	288492	9.12 ppb	94
70)	1,4-Dichlorobenzene	16.563	146	300702	9.06 ppb	95
71)	1,2-Dichlorobenzene	17.221	146	264119	9.04 ppb	95
72)	n-butylbenzene	17.249	91	457556	9.48 ppb #	88
73)	1,2-Dibromo-3-chloropr...	18.654	157	30298	8.49 ppb	93
74)	1,2,4-Trichlorobenzene	20.139	180	101944	8.39 ppb	98
75)	Hexachlorobutadiene	20.471	225	44614	8.91 ppb	97
76)	Naphthalene	20.578	128	302450	7.76 ppb	85
77)	1,2,3-Trichlorobenzene	21.018	180	94857	8.58 ppb	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\04\  
 Data File : 02601026.D  
 Acq On : 4 Dec 2023 10:16 pm  
 Operator : BKP  
 Sample : MDK0735-04 MSD  
 Misc :  
 ALS Vial : 26 Sample Multiplier: 1

Quant Time: Dec 05 13:04:13 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Dec 04 14:33:00 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
<b>Internal Standards</b>							
1) Fluorobenzene	7.650	96	1379802	20.00	ppb	0.00	
38) Chlorobenzene-d5	12.458	117	2168236	20.00	ppb	0.00	
67) 1,4-Dichlorobenzene-d4	16.522	152	1022146	20.00	ppb	0.00	
<b>System Monitoring Compounds</b>							
2) 1,2-Dichloroethane-d4	7.153	65	485593	19.99	ppb	0.00	
Spiked Amount	20.000	Range 85 - 115	Recovery	=	99.95%		
24) Dibromofluoromethane	6.661	111	384802	20.44	ppb	0.00	
Spiked Amount	20.000		Recovery	=	102.20%		
32) Toluene-d8	10.105	98	1849994	20.21	ppb	0.00	
Spiked Amount	20.000		Recovery	=	101.05%		
54) Bromofluorobenzene	14.489	95	1311033	20.36	ppb	0.00	
Spiked Amount	20.000		Recovery	=	101.80%		
68) 1,2-Dichlorobenzene-d4	17.190	152	865898m	19.88	ppb	0.00	
Spiked Amount	20.000		Recovery	=	99.40%		
<b>Target Compounds</b>							
							Qvalue
3) Dichlorodifluoromethane	1.050	85	99983	8.48	ppb		98
4) Chloromethane	1.258	50	211703	9.04	ppb		100
5) Vinyl chloride	1.407	62	293260	9.73	ppb		97
6) Bromomethane	1.880	96	121966	10.65	ppb		95
7) Chloroethane	2.029	64	186667	9.75	ppb		100
8) Trichlorofluoromethane	2.391	101	362710	9.90	ppb		95
9) Diethyl ether	2.863	59	351938	9.42	ppb		86
10) 1,1-Dichloroethene	3.178	61	463731	9.30	ppb		91
11) Acetone	3.345	43	119605	10.27	ppb		80
12) Methyl iodide	3.401	142	212844	9.08	ppb		95
13) Carbon disulfide	3.470	76	869696	9.89	ppb		100
14) Methylene chloride	3.973	84	288002	9.56	ppb		93
15) MTBE (2-methoxy-2-meth...	4.400	73	1193937	9.28	ppb		91
16) trans-1,2-Dichloroethene	4.379	61	522166	9.30	ppb	#	77
17) Acrylonitrile	4.462	53	129628	9.89	ppb		88
18) 1,1-Dichloroethane	5.029	63	668477	9.30	ppb		96
19) Methyl ethyl ketone	6.022	43	206367	9.41	ppb		88
20) 2,2-Dichloropropane	5.892	77	460006	9.13	ppb		99
21) cis-1,2-Dichloroethene	5.922	96	324068	9.31	ppb		99
22) Bromochloromethane	6.280	130	184358	9.69	ppb		100
23) Chloroform	6.417	83	568971	9.43	ppb		96
25) 1,1,1-Trichloroethane	6.642	97	456111	9.54	ppb		82
26) 1,1-Dichloropropene	6.898	75	495810	9.43	ppb		76
27) Carbon tetrachloride	6.880	117	344367	9.90	ppb		98
28) Benzene	7.209	78	1523127	9.35	ppb		99
29) 1,2-Dichloroethane	7.270	62	524646	9.54	ppb		97
30) Trichloroethene	8.204	130	306179	9.47	ppb	#	85
31) 1,2-Dichloropropane	8.554	63	420631	9.28	ppb		96
33) Dibromomethane	8.746	174	173691	9.66	ppb	#	36
34) Bromodichloromethane	9.000	83	422747	9.39	ppb		92
35) cis-1,3-Dichloropropene	9.711	75	578614	8.76	ppb		78
36) Methylisobutyl ketone	9.995	43	527864	9.24	ppb		91

37) Toluene	10.210	91	1346384	9.25	ppb	99
39) trans-1,3-Dichloropropene	10.621	75	510170	8.81	ppb	79
40) 1,1,2-Trichloroethane	10.899	97	306775	9.43	ppb	89
41) Tetrachloroethene	11.072	166	265153	8.82	ppb #	89
42) 2-Hexanone	11.370	43	334159	9.26	ppb	87
43) 1,3-Dichloropropane	11.163	76	600718	9.28	ppb	100
44) Dibromochloromethane	11.518	129	254498	9.12	ppb	100
45) 1,2-Dibromoethane	11.687	107	278697	9.44	ppb	99
46) Chlorobenzene	12.505	112	692370	9.09	ppb #	75
47) 1,1,1,2-Tetrachloroethane	12.659	131	230193	9.21	ppb	93
48) Ethylbenzene	12.710	91	1213223	9.07	ppb	91
49) m+p-Xylene	12.913	91	1776815	18.37	ppb	86
50) o-Xylene	13.584	91	860017	9.22	ppb	87
51) Styrene	13.620	104	650305	8.56	ppb	80
52) Bromoform	13.918	173	112733	8.17	ppb	96
53) Isopropylbenzene	14.234	105	845920	9.29	ppb	96
55) Bromobenzene	14.725	156	195801	9.00	ppb #	41
56) n-Propylbenzene	14.954	91	1008227	9.21	ppb #	88
57) 1,3,5-Trimethylbenzene	15.282	105	571902	9.32	ppb	94
58) 2-Chlorotoluene	15.077	91	596183	9.31	ppb #	77
59) 4-Chlorotoluene	15.279	91	658285	9.11	ppb #	79
60) tert-Butylbenzene	15.843	91	309184	9.10	ppb #	69
61) 1,1,2,2-Tetrachloroethane	14.802	83	322404	9.60	ppb	90
62) trans-1,4-Dichloro-2-b...	14.918	53	100079	8.63	ppb	92
63) 1,2,3-Trichloropropane	14.853	110	92623	9.53	ppb	94
64) 1,2,4-Trimethylbenzene	15.935	105	549270	9.32	ppb	92
65) sec-Butylbenzene	16.236	105	646193	9.36	ppb #	90
66) 4-Isopropyltoluene	16.515	119	498695	9.19	ppb #	94
69) 1,3-Dichlorobenzene	16.400	146	277773	8.95	ppb	94
70) 1,4-Dichlorobenzene	16.564	146	293523	9.01	ppb	94
71) 1,2-Dichlorobenzene	17.220	146	254557	8.88	ppb	93
72) n-butylbenzene	17.249	91	423029	8.94	ppb #	88
73) 1,2-Dibromo-3-chloropr...	18.655	157	31670	9.05	ppb	95
74) 1,2,4-Trichlorobenzene	20.139	180	101616	8.53	ppb	92
75) Hexachlorobutadiene	20.471	225	43536	8.86	ppb	92
76) Naphthalene	20.577	128	310866	8.12	ppb	87
77) 1,2,3-Trichlorobenzene	21.018	180	96743	8.92	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\04\  
 Data File : 02801028.D  
 Acq On : 4 Dec 2023 11:15 pm  
 Operator : BKP  
 Sample : 10 PPB VOC CCV 2  
 Misc :  
 ALS Vial : 28 Sample Multiplier: 1

Quant Time: Dec 05 13:05:09 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Dec 04 14:33:00 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) Fluorobenzene	7.653	96	1370275	20.00	ppb	0.00	
38) Chlorobenzene-d5	12.459	117	2161101	20.00	ppb	0.00	
67) 1,4-Dichlorobenzene-d4	16.523	152	1009670	20.00	ppb	0.00	
System Monitoring Compounds							
2) 1,2-Dichloroethane-d4	7.157	65	481063	19.94	ppb	0.00	
Spiked Amount	20.000	Range 85 - 115	Recovery	=	99.70%		
24) Dibromofluoromethane	6.666	111	382777	20.48	ppb	0.00	
Spiked Amount	20.000		Recovery	=	102.40%		
32) Toluene-d8	10.107	98	1847040	20.32	ppb	0.00	
Spiked Amount	20.000		Recovery	=	101.60%		
54) Bromofluorobenzene	14.490	95	1273728	19.85	ppb	0.00	
Spiked Amount	20.000		Recovery	=	99.25%		
68) 1,2-Dichlorobenzene-d4	17.188	152	850367	19.77	ppb	0.00	
Spiked Amount	20.000		Recovery	=	98.85%		
Target Compounds							
3) Dichlorodifluoromethane	1.057	85	109286	9.39	ppb		Qvalue 97
4) Chloromethane	1.267	50	236035	10.15	ppb		99
5) Vinyl chloride	1.416	62	311527	10.41	ppb		98
6) Bromomethane	1.879	96	119181	10.44	ppb		94
7) Chloroethane	2.035	64	191162	10.08	ppb		98
8) Trichlorofluoromethane	2.398	101	385281	10.59	ppb		98
9) Diethyl ether	2.870	59	393562	10.61	ppb		87
10) 1,1-Dichloroethene	3.185	61	506275	10.23	ppb		92
11) Acetone	3.373	43	123326m	10.73	ppb		
12) Methyl iodide	3.408	142	222803m	9.59	ppb		
13) Carbon disulfide	3.477	76	894032	10.24	ppb		100
14) Methylene chloride	3.980	84	303851	10.15	ppb		93
15) MTBE (2-methoxy-2-meth...	4.407	73	1300986	10.18	ppb		92
16) trans-1,2-Dichloroethene	4.385	61	574800	10.31	ppb	#	77
17) Acrylonitrile	4.461	53	139430	10.71	ppb		85
18) 1,1-Dichloroethane	5.035	63	733147	10.27	ppb		96
19) Methyl ethyl ketone	6.029	43	227912	10.44	ppb		87
20) 2,2-Dichloropropane	5.897	77	491198	9.81	ppb		99
21) cis-1,2-Dichloroethene	5.927	96	355360	10.28	ppb		97
22) Bromochloromethane	6.283	130	201862	10.69	ppb		98
23) Chloroform	6.421	83	618163	10.31	ppb		95
25) 1,1,1-Trichloroethane	6.647	97	482736	10.17	ppb		80
26) 1,1-Dichloropropene	6.901	75	533656	10.22	ppb		75
27) Carbon tetrachloride	6.884	117	362373	10.49	ppb		98
28) Benzene	7.212	78	1663345	10.29	ppb		99
29) 1,2-Dichloroethane	7.273	62	571522	10.47	ppb		96
30) Trichloroethene	8.207	130	332126	10.34	ppb	#	83
31) 1,2-Dichloropropane	8.557	63	462250	10.27	ppb		97
33) Dibromomethane	8.749	174	190143	10.65	ppb	#	34
34) Bromodichloromethane	9.003	83	459239	10.28	ppb		94
35) cis-1,3-Dichloropropene	9.713	75	629228	9.62	ppb		78
36) Methyl isobutyl ketone	9.997	43	571110	10.10	ppb		90

37) Toluene	10.211	91	1478180	10.23	ppb	100
39) trans-1,3-Dichloropropene	10.622	75	553502	9.61	ppb	79
40) 1,1,2-Trichloroethane	10.900	97	328935	10.14	ppb	87
41) Tetrachloroethene	11.073	166	295022	9.84	ppb	89
42) 2-Hexanone	11.370	43	357368	9.95	ppb	88
43) 1,3-Dichloropropane	11.164	76	657032	10.19	ppb	100
44) Dibromochloromethane	11.520	129	271894	9.78	ppb	97
45) 1,2-Dibromoethane	11.688	107	302445	10.28	ppb	96
46) Chlorobenzene	12.506	112	754089	9.93	ppb #	76
47) 1,1,1,2-Tetrachloroethane	12.660	131	250970	10.08	ppb	97
48) Ethylbenzene	12.711	91	1327664	9.96	ppb	92
49) m+p-Xylene	12.914	91	1963712	20.36	ppb	88
50) o-Xylene	13.584	91	933532	10.04	ppb	89
51) Styrene	13.620	104	724993	9.61	ppb	81
52) Bromoform	13.918	173	118275	8.60	ppb	96
53) Isopropylbenzene	14.235	105	922600	10.17	ppb	96
55) Bromobenzene	14.726	156	211719	9.76	ppb #	37
56) n-Propylbenzene	14.955	91	1098869	10.07	ppb #	86
57) 1,3,5-Trimethylbenzene	15.282	105	624807	10.22	ppb	94
58) 2-Chlorotoluene	15.077	91	640839	10.04	ppb #	77
59) 4-Chlorotoluene	15.279	91	734175m	10.20	ppb	
60) tert-Butylbenzene	15.844	91	335487	9.91	ppb #	72
61) 1,1,2,2-Tetrachloroethane	14.803	83	337520	10.09	ppb	90
62) trans-1,4-Dichloro-2-b...	14.919	53	107372	9.29	ppb	94
63) 1,2,3-Trichloropropane	14.853	110	98223	10.14	ppb	98
64) 1,2,4-Trimethylbenzene	15.936	105	604818	10.30	ppb	94
65) sec-Butylbenzene	16.236	105	695591	10.10	ppb #	90
66) 4-Isopropyltoluene	16.515	119	536698	9.93	ppb #	92
69) 1,3-Dichlorobenzene	16.401	146	301911	9.85	ppb	95
70) 1,4-Dichlorobenzene	16.564	146	319345	9.93	ppb	95
71) 1,2-Dichlorobenzene	17.221	146	277585	9.80	ppb	91
72) n-butylbenzene	17.250	91	460763	9.86	ppb #	87
73) 1,2-Dibromo-3-chloropr...	18.654	157	34476	9.99	ppb	92
74) 1,2,4-Trichlorobenzene	20.140	180	113691	9.66	ppb	92
75) Hexachlorobutadiene	20.472	225	47528	9.79	ppb	96
76) Naphthalene	20.579	128	349184	9.20	ppb	87
77) 1,2,3-Trichlorobenzene	21.019	180	108413	10.12	ppb	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

BDL0149  
BDL0182

Starting sequence Tue Dec 05 09:13:34 2023

Instrument Name: MSD1  
Sequence File: C:\msdchem\1\sequence\112723.S  
Comment:  
Operator: BKP  
Data Path: C:\MSDCHEM\1\DATA\2023 DEC\05\  
Method Path: C:\MSDCHEM\1\METHODS\

B. P. [Signature]  
12/6/23

Line Type	Vial	DataFile	Method	Sample Name
1) Sample	1	00101001	8260PC30	RINSE
2) Sample	2	00201002	8260PC30	BLANK
3) Sample	3	00301003	8260PC30	10 PPB VOC CCV
4) Sample	4	00401004	8260PC30	RINSE
5) Sample	5	00501005	8260PC30	MDL0022-01
6) Sample	6	00601006	8260PC30	MDL0022-02
7) Sample	7	00701007	8260PC30	MDL0022-03
8) Sample	8	00801008	8260PC30	MDL0022-04
9) Sample	9	00901009	8260PC30	MDL0022-05
10) Sample	10	01001010	8260PC30	MDL0022-06
11) Sample	11	01101011	8260PC30	MDL0022-07
12) Sample	12	01201012	8260PC30	MDL0022-09
13) Sample	13	01301013	8260PC30	MDL0022-10
14) Sample	14	01401014	8260PC30	MDL0022-08
15) Sample	15	01501015	8260PC30	MDL0022-01 MS
16) Sample	16	01601016	8260PC30	MDL0022-01 MSD
17) Sample	17	01701017	8260PC30	RINSE
18) Sample	18	01801018	8260PC30	MDL0045-02
19) Sample	19	01901019	8260PC30	MDL0045-04
20) Sample	20	02001020	8260PC30	MDK0724-01
21) Sample	21	02101021	8260PC30	MDL0045-01
22) Sample	22	02201022	8260PC30	MDL0045-03
23) Sample	23	02301023	8260PC30	MDL0045-01
24) Sample	24	02401024	8260PC30	MDL0045-03
25) Sample	25	02501025	8260PC30	MDL0045-01
26) Sample	26	02601026	8260PC30	MDL0045-03
27) Sample	27	02701027	8260PC30	RINSE
28) Sample	28	02801028	8260PC30	10 PPB VOC CCV 2
29) Sample	29	02901029	8260PC30	RINSE
30) Sample	30	03001030	8260PC30	MDK0690-01 -Data entered in batch BDL1093
31) Sample	31	03101031	8260PC30	MDK0745-01
32) Sample	32	03201032	8260PC30	MDK0649-02
33) Sample	33	03301033	8260PC30	RINSE
34) Sample	34	03401034	8260PC30	10 PPB VOC CCV 3
35) Sample	35	03501035	8260PC30	RINSE

Sequence completed Wed Dec 06 02:26:42 2023

C:\MSDCHEM\1\DATA\2023 DEC\05\2023 Dec 05 0913 Quality Log.LOG

C:\MSDCHEM\1\DATA\2023 DEC\05\2023 Dec 05 0913 Sequence Log .LOG

QC Checklist for EPA 8260/624.1 - VOCs

Analysis Date: 12/5/23

<input checked="" type="checkbox"/>	QC Parameter	Acceptance Criteria	Frequency	Notes
<input checked="" type="checkbox"/>	BFB Tune	See below		
<input checked="" type="checkbox"/>	Initial Calibration	90% must meet <20%RSD	At least 6 points	If regression is used, weight as 1/x, with R <sup>2</sup> > 0.920
<input checked="" type="checkbox"/>	Initial Calibration	Reprocessed cal points must be within 70-130%		
<input checked="" type="checkbox"/>	Response Factor	Check against list on back		Include CCV RF report in data packet
<input checked="" type="checkbox"/>	Internal Standard	50-200% of mid-point CAL	All samples	
<input checked="" type="checkbox"/>	Surrogate Recovery	85-115%	All samples	
<input checked="" type="checkbox"/>	ICV/QCS	70-130%	Each ICAL	
<input checked="" type="checkbox"/>	Blanks	No interferences	Every 20 samples	
<input checked="" type="checkbox"/>	CCV	80% within ±20%	At beginning of run and every 12 hours.	
<input checked="" type="checkbox"/>	MS/MSD	±20%	Every 20 samples	
<input checked="" type="checkbox"/>	Cal Prep Form Present			
<input checked="" type="checkbox"/>	pH/Chlorine checks	pH < 2 THM Chlorine check	All samples	
<input checked="" type="checkbox"/>	Dilutions Noted?			

Comments:

m/z	Required Intensity (relative abundance)
50	15 to 40% of m/z 95
75	30 to 60% of m/z 95
95	Base peak, 100% relative abundance
96	5 to 9% of m/z 95
173	Less than 2% of m/z 174
174	50 to 200% of m/z 95
175	5 to 9% of m/z 174
176	95% to 101% of m/z 174
177	5 to 9% of m/z 176

Analyst: Blup

Checklist Completed Date: 12/5/23

Reviewed By: A

Date: 12/19/23



RF Factor Table for EPA 8260/624.1 - VOCs

Analyte	RF	Check if <	Analyte	RF	Check if <
1,1,1-Trichloroethane	0.05		Carbon tetrachloride	0.1	
1,1,2,2-Tetrachloroethane	0.2		Chlorobenzene	0.4	
1,1,2-Trichloroethane	0.2		Chlorodibromomethane	0.2	
1,1-Dichloroethane	0.3		Chloroethane (Ethyl chloride)	0.01	
1,1-Dichloroethylene	0.06		Chloroform	0.3	
1,2,3-Trichloropropane	0.4		cis-1,2-Dichloroethylene	0.2	
1,2,4-Trichlorobenzene	0.4		cis-1,3-Dichloropropene	0.3	
1,2-Dibromo-3-chloropropane (DBCP)	0.01		Ethylbenzene	0.4	
1,2-Dibromoethane (EDB, Ethylene dibromide)	0.2		Isopropylbenzene	0.4	
1,2-Dichlorobenzene	0.6		m+p-xylene	0.2	
1,2-Dichloroethane (Ethylene dichloride)	0.07		Methyl bromide (Bromomethane)	0.01	
1,2-Dichloropropane	0.2		Methyl chloride (Chloromethane)	0.01	
1,3-Dichlorobenzene	0.5		Methyl tert-butyl ether (MTBE)	0.1	
1,4-Dichlorobenzene	0.6		o-Xylene	0.2	
2-Butanone (Methyl ethyl ketone, MEK)	0.01		Styrene	0.2	
2-Hexanone	0.01		Tetrachloroethylene (Perchloroethylene)	0.1	
4-Methyl-2-pentanone (MIBK)	0.03		Toluene	0.3	
Acetone	0.01		trans-1,2-Dichloroethylene	0.1	
Benzene	0.2		trans-1,3-Dichloropropylene	0.3	
Bromochloromethane	0.1		Trichloroethene (Trichloroethylene)	0.2	
Bromodichloromethane	0.3		Trichlorofluoromethane (Freon 11)	0.01	
Bromoform	0.1		Vinyl chloride	0.01	
Carbon disulfide	0.1				

Taken from Table 4, EPA Method 8260D



# Anatek Labs, Inc

1282 Alturas Drive  
Moscow, ID 83843

## Calibration Standard Preparation Form

Method: EPA 8260/624.1

Initial Calibration and CCV Standard Number: 2302582  
Initial Calibration and CCV Standard Concentration: 200 ug/mL  
Initial Calibration and CCV Standard Expiration Date: 2/28/2026

Matrix Spiking Standard Number: 2302582  
Matrix Spiking Standard Concentration: 200 ug/ml  
Matrix Spiking Standards Expiration Dates: 2/28/2026

Initial Calibration Verification (ICV) Standard Number: 2301142  
Initial Calibration Verification (ICV) Standard Concentration: 200 ug/ml  
Initial Calibration Verification (ICV) Expiration Date: 5/31/2025

Internal Standard / Surrogate Standard Number: 2204337  
Internal Standard / Surrogate Standard Concentration: 125 ug/ml  
Internal Standard / Surrogate Standard Sample Concentration: Archon adds 125 ng to 5 ml  
Expiration Date: 01/04/2024

### Initial Calibration Dilution Template (minimum of 5 calibration points)

Desired Concentration (ppb)	Stock Concentration (ppm)	uL Standard Added	Final Volume (mL)
30	200	7.5	50
20	200	5	50
15	200	7.5	100
10	200	5.0	100
5	200	2.5	100
2	200	1.0	100
0.5	10 ppb Cal std	5 ml	100
ICV 10	200	5	100

Add 2 drops of 1:1 HCl per 50mL to Standards, CCV, ICV, and Reagent Blanks.

### Calibration Prep:

ICAL and ICV Prep Date: 12/4/2023

### Solution Prepared:

- CCV
  - MS/MSD
  - pH check
  - Chlorine check (THM)
- pH paper reagent # 2002327  
Free Chlorine Test strip reagent# 2301362

Analyst: BWP

Date of Preparation: 12/5/23

# PREPARATION BENCH SHEET

BDL0182

Matrix: Solid

Prepared using: VOC - VOC

Surrogate used: 2302876

Lab Number	Analysis	Prepared - By	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Client	Extraction Comments
BDL0182-BLK1	QC	12/05/23 08:31-BKP	10	500				100		
BDL0182-BS1	QC	12/05/23 08:31-BKP	10	500	2302582		25	100		
MDK0745-01	VOC 8260	12/05/23 15:31-BKP	6.19	500				100	RJ Lee Group	

Support Info: P-Syringe(s) BAL-09

Reagent	Description	LotNum
2302771	Methanol P&T	62199
2303166	HCl 1:1	-

  
Prepared By:

12/6/23  
Date

12/5/23  
Analytical Run Date:

# PREPARATION BENCH SHEET

BDL0149

Matrix: Water

Prepared using: VOC - VOC

Surrogate used: 2302876

Lab Number	Analysis	Prepared - By	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Client	Extraction Comments
BDL0149-BLK1	QC	12/05/23 09:58-BKP	50	50				10		
BDL0149-BS1	QC	12/05/23 10:28-BKP	50	50	2302582		2.5	10		
BDL0149-MS1	QC	12/05/23 16:22-BKP	50	50	2302582	MDL0022-01	2.5	10		
BDL0149-MSD1	QC	12/05/23 16:51-BKP	50	50	2302582	MDL0022-01	2.5	10		
MDK0724-01	VOC 8260	12/05/23 18:48-BKP	50	50				10	IAS-EnviroChem	
MDL0022-01	VOC 8260	12/05/23 11:27-BKP	50	50				10	PBS Engineering - Portland	
MDL0022-01	VOC Trip Blank 8260	12/05/23 10:45-BKP	50	50				10	PBS Engineering - Portland	Added for BatchQC in: BDL0149
MDL0022-02	VOC 8260	12/05/23 11:56-BKP	50	50				10	PBS Engineering - Portland	
MDL0022-03	VOC 8260	12/05/23 12:26-BKP	50	50				10	PBS Engineering - Portland	
MDL0022-04	VOC 8260	12/05/23 12:56-BKP	50	50				10	PBS Engineering - Portland	
MDL0022-05	VOC 8260	12/05/23 13:25-BKP	50	50				10	PBS Engineering - Portland	
MDL0022-06	VOC 8260	12/05/23 13:55-BKP	50	50				10	PBS Engineering - Portland	
MDL0022-07	VOC 8260	12/05/23 14:24-BKP	50	50				10	PBS Engineering - Portland	
MDL0022-08	VOC Trip Blank 8260	12/05/23 15:52-BKP	50	50				10	PBS Engineering - Portland	
MDL0022-09	VOC 8260	12/05/23 14:53-BKP	50	50				10	PBS Engineering - Portland	
MDL0022-10	VOC 8260	12/05/23 15:23-BKP	50	50				10	PBS Engineering - Portland	
MDL0045-01	VOC 8260	12/05/23 19:17-BKP	50	50				10	Brooks Manufacturing Co.	
MDL0045-02	VOC Trip Blank 8260	12/05/23 17:49-BKP	50	50				10	Brooks Manufacturing Co.	
MDL0045-03	VOC 8260	12/05/23 19:46-BKP	50	50				10	Brooks Manufacturing Co.	
MDL0045-04	VOC Trip Blank 8260	12/05/23 18:18-BKP	50	50				10	Brooks Manufacturing Co.	

Support Info: P-Syringe(s) BAL-09

Reagent	Description	LotNum
2302771	Methanol P&T	62199
2303166	HCl 1:1	-

  
Prepared By:

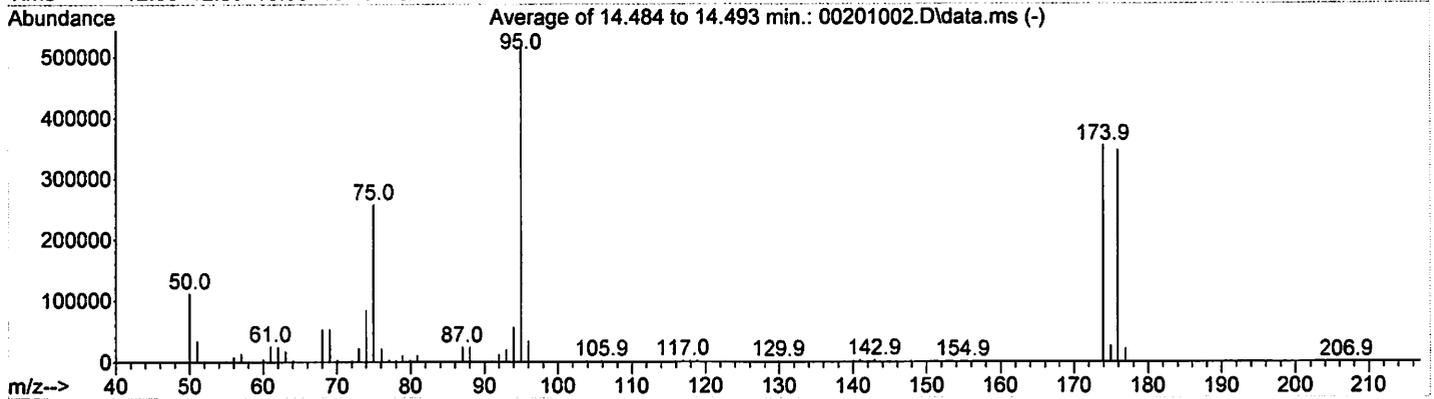
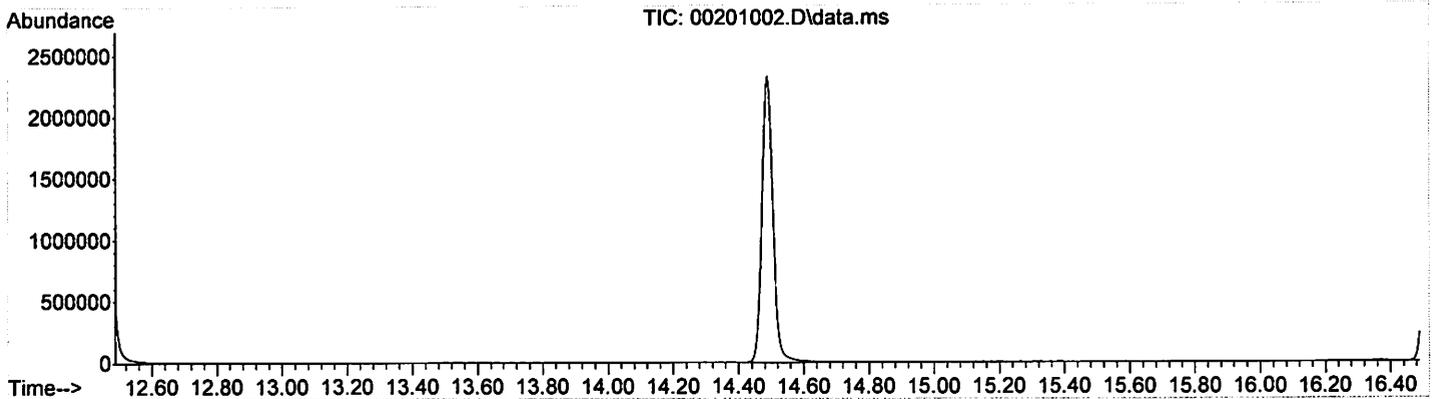
12/6/23  
Date

12/5/23  
Analytical Run Date:

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\05\  
 Data File : 00201002.D  
 Acq On : 5 Dec 2023 9:58 am  
 Operator : BKP  
 Sample : BLANK  
 Misc :  
 ALS Vial : 2 Sample Multiplier: 1

Integration File: rteint.p

Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 Last Update : Mon Dec 04 14:33:00 2023



AutoFind: Scans 2413, 2414, 2415; Background Corrected with Scan 2397

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
Mass	Mass	Limit%	Limit%	Abn%	Abn	Pass/Fail
50	95	15	40	21.6	111773	PASS
75	95	30	60	49.7	257856	PASS
95	95	100	100	100.0	518571	PASS
96	95	5	9	6.6	34051	PASS
173	174	0.00	2	0.2	846	PASS
174	95	50	200	68.3	354368	PASS
175	174	5	9	7.1	25224	PASS
176	174	95	105	97.8	346411	PASS
177	176	5	9	6.4	22019	PASS

ResponseFactor Report MSD1

Method Path : T:\Data2\Voc\HP5975\2023 METHODS\  
 Method File : DEC04.M  
 Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 Last Update : Tue Dec 05 14:48:52 2023  
 Response Via : Initial Calibration

Calibration Files

0.5 =00301003.D 5 =00501005.D 10 =00601006.D 30 =00901009.D 20 =00801008.D 2 =00.

Compound	0.5	5	10	30	20	2	15	Avg	%RSD
-----ISTD-----									
1) I Fluorobenzene									
2) S 1,2-Dichloroet...	0.367	0.353	0.349	0.339	0.343	0.365	0.348	0.352	2.93
3) Dichlorodifluo...	0.136	0.167	0.167	0.135	0.157	0.123	0.173	0.151	12.88
4) Chloromethane	0.394	0.356	0.356	0.314	0.349	0.333	0.360	0.352	7.05
5) Vinyl chloride	0.418	0.465	0.466	0.392	0.448	0.391	0.479	0.437	8.36
6) Bromomethane	0.198	0.173	0.175	0.114	0.135	0.145	0.165	0.158	17.89
7) Chloroethane	0.280	0.273	0.282	0.213	0.245	0.236	0.277	0.258	10.42
8) Trichlorofluor...	0.484	0.579	0.581	0.473	0.551	0.449	0.601	0.531	11.53
9) Diethyl ether	0.540	0.554	0.571	0.491	0.546	0.519	0.568	0.541	5.24
10) 1,1-Dichloroet...	0.698	0.760	0.768	0.659	0.749	0.641	0.784	0.723	7.81
11) Acetone		0.199	0.180	0.143	0.156	0.244	0.178	0.183	19.39
12) Methyl iodide	0.315	0.318	0.350	0.297	0.332	0.266	0.351	0.318	9.50
13) Carbon disulfide	1.294	1.346	1.366	1.124	1.275	1.151	1.367	1.275	7.86
14) Methylene chlo...	0.522	0.433	0.447	0.375	0.419	0.421	0.441	0.437	10.13
15) MTBE (2-methox...	2.095	1.869	1.900	1.646	1.837	1.800	1.911	1.866	7.23
16) trans-1,2-Dich...	0.806	0.845	0.856	0.739	0.826	0.757	0.867	0.814	6.06
17) Acrylonitrile		0.160	0.205	0.197	0.214	0.142	0.222	0.190	16.80
18) 1,1-Dichloroet...	1.046	1.069	1.092	0.941	1.048	1.002	1.096	1.042	5.27
19) Methyl ethyl k...	0.254	0.265	0.307	0.315	0.339	0.305	0.351	0.305	11.72
20) 2,2-Dichloropr...		0.754	0.764	0.665	0.749	0.664	0.787	0.730	7.23
21) cis-1,2-Dichlo...	0.493	0.510	0.530	0.466	0.513	0.479	0.541	0.505	5.36
22) Bromochloromet...	0.276	0.281	0.292	0.240	0.274	0.274	0.294	0.276	6.50
23) Chloroform	0.891	0.886	0.914	0.777	0.869	0.877	0.909	0.875	5.26
24) S Dibromofluorom...	0.273	0.275	0.272	0.271	0.275	0.270	0.273	0.273	0.73
25) 1,1,1-Trichlor...	0.679	0.727	0.734	0.624	0.702	0.641	0.744	0.693	6.79
26) 1,1-Dichloropr...	0.712	0.808	0.817	0.692	0.789	0.682	0.835	0.762	8.48
27) Carbon tetrach...	0.432	0.536	0.548	0.472	0.537	0.435	0.569	0.504	11.23
28) Benzene	2.329	2.441	2.486	2.106	2.365	2.319	2.477	2.360	5.56
29) 1,2-Dichloroet...	0.764	0.833	0.837	0.708	0.792	0.816	0.828	0.797	5.92
30) Trichloroethene	0.477	0.486	0.491	0.416	0.467	0.451	0.493	0.469	5.84
31) 1,2-Dichloropr...	0.667	0.674	0.680	0.582	0.654	0.660	0.684	0.657	5.27
32) S Toluene-d8	1.303	1.332	1.334	1.321	1.332	1.325	1.339	1.327	0.91
33) Dibromomethane	0.258	0.265	0.270	0.236	0.262	0.259	0.274	0.261	4.71
34) Bromodichlorom...	0.664	0.672	0.682	0.583	0.652	0.631	0.681	0.652	5.44
35) cis-1,3-Dichlo...	0.780	0.899	0.943	0.836	0.935	0.845	0.964	0.886	7.63
36) Methyl isobuty...		0.756	0.826	0.748	0.828	0.678	0.877	0.785	9.11
37) Toluene	2.014	2.175	2.202	1.903	2.132	2.113	2.223	2.109	5.41
-----ISTD-----									
38) I Chlorobenzene-d5									
39) trans-1,3-Dich...	0.436	0.503	0.536	0.492	0.543	0.460	0.550	0.503	8.61
40) 1,1,2-Trichlor...	0.304	0.304	0.311	0.268	0.299	0.306	0.310	0.300	4.96
41) Tetrachloroethene	0.320	0.285	0.282	0.237	0.267	0.269	0.281	0.277	8.94
42) 2-Hexanone		0.290	0.338	0.312	0.339	0.246	0.363	0.315	13.33
43) 1,3-Dichloropr...	0.596	0.607	0.620	0.536	0.599	0.600	0.620	0.597	4.75
44) Dibromochlorom...	0.251	0.261	0.268	0.235	0.262	0.251	0.272	0.257	4.89
45) 1,2-Dibromoethane	0.262	0.274	0.286	0.250	0.277	0.268	0.289	0.272	4.99
46) Chlorobenzene	0.688	0.721	0.730	0.631	0.698	0.719	0.731	0.703	5.05
47) 1,1,1,2-Tetrac...	0.224	0.231	0.242	0.211	0.231	0.232	0.243	0.231	4.74
48) Ethylbenzene	1.122	1.260	1.304	1.156	1.279	1.189	1.329	1.234	6.38
49) m+p-Xylene	0.756	0.920	0.962	0.843	0.938	0.852	0.975	0.892	8.83
50) o-Xylene	0.737	0.874	0.919	0.823	0.915	0.814	0.944	0.861	8.54
51) Styrene	0.488	0.632	0.703	0.607	0.696	0.571	0.701	0.628	12.84
52) Bromoform	0.119	0.127	0.130	0.119	0.133	0.124	0.134	0.127	4.90
53) Isopropylbenzene	0.663	0.857	0.914	0.816	0.909	0.774	0.944	0.840	11.67

54)	S	Bromofluoroben...	0.589	0.596	0.598	0.591	0.596	0.587	0.601	0.594	0.90
55)		Bromobenzene	0.195	0.204	0.207	0.183	0.202	0.206	0.208	0.201	4.57
56)		n-Propylbenzene	0.847	1.040	1.100	0.957	1.075	0.934	1.119	1.010	9.95
57)		1,3,5-Trimethy...	0.455	0.586	0.625	0.541	0.608	0.516	0.630	0.566	11.40
58)		2-Chlorotoluene	0.514	0.613	0.629	0.551	0.614	0.575	0.638	0.591	7.69
59)		4-Chlorotoluene	0.585	0.688	0.713	0.623	0.699	0.635	0.721	0.666	7.82
60)		tert-Butylbenzene	0.261	0.324	0.339	0.298	0.337	0.285	0.349	0.313	10.39
61)		1,1,2,2-Tetrac...	0.311	0.316	0.320	0.275	0.312	0.308	0.327	0.310	5.33
62)		trans-1,4-Dich...		0.098	0.105	0.101	0.110	0.088	0.114	0.103	9.25
63)		1,2,3-Trichlor...	0.088	0.092	0.094	0.080	0.089	0.089	0.094	0.090#	5.40
64)		1,2,4-Trimethy...	0.425	0.553	0.597	0.532	0.596	0.492	0.611	0.544	12.36
65)		sec-Butylbenzene	0.499	0.659	0.704	0.615	0.698	0.563	0.721	0.637	12.98
66)		4-Isopropyltol...	0.430	0.513	0.542	0.473	0.535	0.456	0.553	0.500	9.47
67)	I	1,4-Dichlorobenzen...	-----ISTD-----								
68)	S	1,2-Dichlorobe...	0.872	0.846	0.848	0.845	0.847	0.853	0.855	0.852	1.11
69)		1,3-Dichlorobe...	0.564	0.619	0.629	0.559	0.619	0.618	0.642	0.607	5.30
70)		1,4-Dichlorobe...	0.640	0.642	0.656	0.569	0.641	0.649	0.663	0.637	4.90
71)		1,2-Dichlorobe...	0.588	0.558	0.572	0.497	0.558	0.577	0.577	0.561	5.37
72)		n-butylbenzene	0.793	0.942	1.013	0.872	0.985	0.854	1.022	0.926	9.47
73)		1,2-Dibromo-3-...	0.059	0.066	0.067	0.064	0.067	0.062	0.070	0.065#	5.80
74)		1,2,4-Trichlor...	0.195	0.228	0.246	0.236	0.246	0.230	0.251	0.233	8.14
75)		Hexachlorobuta...	0.101	0.099	0.103	0.083	0.096	0.091	0.099	0.096#	7.00
76)		Naphthalene	0.542	0.627	0.710	0.785	0.772	0.577	0.786	0.686	15.08
77)		1,2,3-Trichlor...	0.197	0.206	0.220	0.209	0.224	0.202	0.229	0.212	5.65

(#) = Out of Range

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\05\  
 Data File : 00201002.D  
 Acq On : 5 Dec 2023 9:58 am  
 Operator : BKP  
 Sample : BLANK  
 Misc :  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 05 14:45:21 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Dec 04 14:33:00 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	7.653	96	1305046	20.00	ppb	0.00
38) Chlorobenzene-d5	12.460	117	2121909	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.524	152	960234	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.161	65	482035	20.98	ppb	0.01
Spiked Amount 20.000	Range 85 - 115		Recovery	= 104.90%		
24) Dibromofluoromethane	6.667	111	362986	20.39	ppb	0.00
Spiked Amount 20.000			Recovery	= 101.95%		
32) Toluene-d8	10.108	98	1747076	20.18	ppb	0.00
Spiked Amount 20.000			Recovery	= 100.90%		
54) Bromofluorobenzene	14.490	95	1253555	19.90	ppb	0.00
Spiked Amount 20.000			Recovery	= 99.50%		
68) 1,2-Dichlorobenzene-d4	17.189	152	843736	20.62	ppb	0.00
Spiked Amount 20.000			Recovery	= 103.10%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\05\  
 Data File : 00301003.D  
 Acq On : 5 Dec 2023 10:28 am  
 Operator : BKP  
 Sample : 10 PPB VOC CCV  
 Misc :  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 05 14:49:19 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Tue Dec 05 14:48:52 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
<b>Internal Standards</b>							
1) Fluorobenzene	7.650	96	1355061	20.00	ppb	0.00	
38) Chlorobenzene-d5	12.457	117	2181132	20.00	ppb	0.00	
67) 1,4-Dichlorobenzene-d4	16.522	152	1037557	20.00	ppb	0.00	
<b>System Monitoring Compounds</b>							
2) 1,2-Dichloroethane-d4	7.154	65	481448	20.18	ppb	0.00	
Spiked Amount	20.000	Range 85 - 115	Recovery	=	100.90%		
24) Dibromofluoromethane	6.662	111	378768	20.49	ppb	0.00	
Spiked Amount	20.000		Recovery	=	102.45%		
32) Toluene-d8	10.105	98	1848930	20.57	ppb	0.00	
Spiked Amount	20.000		Recovery	=	102.85%		
54) Bromofluorobenzene	14.488	95	1320346	20.39	ppb	0.00	
Spiked Amount	20.000		Recovery	=	101.95%		
68) 1,2-Dichlorobenzene-d4	17.187	152	869281	19.66	ppb	0.00	
Spiked Amount	20.000		Recovery	=	98.30%		
<b>Target Compounds</b>							
							Qvalue
3) Dichlorodifluoromethane	1.053	85	96267	8.31	ppb		97
4) Chloromethane	1.261	50	214714	9.34	ppb		97
5) Vinyl chloride	1.410	62	277662	9.38	ppb		99
6) Bromomethane	1.867	96	101348	8.75	ppb		98
7) Chloroethane	2.025	64	164236	8.64	ppb		97
8) Trichlorofluoromethane	2.388	101	347591	9.66	ppb		98
9) Diethyl ether	2.865	59	328738	8.96	ppb		90
10) 1,1-Dichloroethene	3.178	61	455264	9.30	ppb		90
11) Acetone	3.352	43	105295	9.04	ppb		79
12) Methyl iodide	3.401	142	195185	8.45	ppb		92
13) Carbon disulfide	3.470	76	790689	9.16	ppb		100
14) Methylene chloride	3.974	84	265997	8.99	ppb		94
15) MTBE (2-methoxy-2-meth...	4.403	73	1095269	8.67	ppb		91
16) trans-1,2-Dichloroethene	4.380	61	501892	9.10	ppb	#	73
17) Acrylonitrile	4.460	53	107930	8.38	ppb		98
18) 1,1-Dichloroethane	5.030	63	644792	9.13	ppb		95
19) Methyl ethyl ketone	6.036	43	186597m	8.67	ppb		
20) 2,2-Dichloropropane	5.892	77	446476	9.02	ppb		99
21) cis-1,2-Dichloroethene	5.925	96	309732	9.06	ppb		95
22) Bromochloromethane	6.280	130	172141	9.21	ppb		99
23) Chloroform	6.417	83	537057	9.06	ppb		96
25) 1,1,1-Trichloroethane	6.643	97	432094	9.20	ppb		79
26) 1,1-Dichloropropene	6.898	75	481917	9.33	ppb		73
27) Carbon tetrachloride	6.880	117	324031	9.49	ppb		98
28) Benzene	7.209	78	1452538	9.08	ppb		99
29) 1,2-Dichloroethane	7.271	62	492178	9.12	ppb		95
30) Trichloroethene	8.203	130	287630	9.06	ppb	#	84
31) 1,2-Dichloropropane	8.554	63	398424	8.95	ppb		97
33) Dibromomethane	8.745	174	158628	8.99	ppb	#	39
34) Bromodichloromethane	9.001	83	397934	9.00	ppb		92
35) cis-1,3-Dichloropropene	9.711	75	540808	8.32	ppb		77
36) Methyl isobutyl ketone	9.995	43	463766	8.24	ppb		90

37)	Toluene	10.209	91	1299758	9.10	ppb	99
39)	trans-1,3-Dichloropropene	10.620	75	472327	8.10	ppb	80
40)	1,1,2-Trichloroethane	10.898	97	283502	8.66	ppb #	84
41)	Tetrachloroethene	11.071	166	260816	8.62	ppb #	89
42)	2-Hexanone	11.375	43	301704m	8.30	ppb	
43)	1,3-Dichloropropane	11.163	76	561099	8.62	ppb	100
44)	Dibromochloromethane	11.518	129	239515	8.53	ppb	95
45)	1,2-Dibromoethane	11.687	107	256954	8.65	ppb	98
46)	Chlorobenzene	12.504	112	671594	8.77	ppb #	77
47)	1,1,1,2-Tetrachloroethane	12.658	131	216439	8.61	ppb	93
48)	Ethylbenzene	12.709	91	1187459	8.82	ppb	91
49)	m+p-Xylene	12.913	91	1767565	18.16	ppb	87
50)	o-Xylene	13.583	91	837353	8.92	ppb	88
51)	Styrene	13.618	104	645156	8.44	ppb	81
52)	Bromoform	13.917	173	111527	8.04	ppb	95
53)	Isopropylbenzene	14.233	105	837577	9.15	ppb	97
55)	Bromobenzene	14.725	156	188923	8.63	ppb #	39
56)	n-Propylbenzene	14.953	91	1002993	9.10	ppb #	85
57)	1,3,5-Trimethylbenzene	15.280	105	567577	9.20	ppb	97
58)	2-Chlorotoluene	15.075	91	580455	9.01	ppb #	78
59)	4-Chlorotoluene	15.278	91	655163	9.02	ppb #	81
60)	tert-Butylbenzene	15.842	91	307520	9.00	ppb #	72
61)	1,1,2,2-Tetrachloroethane	14.801	83	291987	8.65	ppb	91
62)	trans-1,4-Dichloro-2-b...	14.918	53	93548	8.01	ppb	96
63)	1,2,3-Trichloropropane	14.852	110	84966	8.69	ppb	94
64)	1,2,4-Trimethylbenzene	15.934	105	551049	9.29	ppb	91
65)	sec-Butylbenzene	16.235	105	644159	9.27	ppb #	90
66)	4-Isopropyltoluene	16.513	119	500132	9.16	ppb #	92
69)	1,3-Dichlorobenzene	16.399	146	275546	8.75	ppb	95
70)	1,4-Dichlorobenzene	16.562	146	286378	8.66	ppb	95
71)	1,2-Dichlorobenzene	17.219	146	246323	8.46	ppb	92
72)	n-butylbenzene	17.248	91	434250	9.04	ppb #	89
73)	1,2-Dibromo-3-chloropr...	18.653	157	28789	8.10	ppb	86
74)	1,2,4-Trichlorobenzene	20.138	180	99685	8.24	ppb	95
75)	Hexachlorobutadiene	20.470	225	45476	9.12	ppb	97
76)	Naphthalene	20.576	128	287530	8.08	ppb	85
77)	1,2,3-Trichlorobenzene	21.017	180	90919	8.26	ppb	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\05\  
 Data File : 00501005.D  
 Acq On : 5 Dec 2023 11:27 am  
 Operator : BKP  
 Sample : MDL0022-01  
 Misc :  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 05 15:35:35 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Tue Dec 05 14:48:52 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) Fluorobenzene	7.653	96	1275238	20.00	ppb	0.00
38) Chlorobenzene-d5	12.458	117	2114647	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.522	152	973702	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.160	65	478139	21.29	ppb	0.01
Spiked Amount	20.000	Range 85 - 115	Recovery	=	106.45%	
24) Dibromofluoromethane	6.667	111	369763	21.26	ppb	0.00
Spiked Amount	20.000		Recovery	=	106.30%	
32) Toluene-d8	10.107	98	1725026	20.39	ppb	0.00
Spiked Amount	20.000		Recovery	=	101.95%	
54) Bromofluorobenzene	14.489	95	1256934	20.02	ppb	0.00
Spiked Amount	20.000		Recovery	=	100.10%	
68) 1,2-Dichlorobenzene-d4	17.187	152	858155	20.68	ppb	0.00
Spiked Amount	20.000		Recovery	=	103.40%	
Target Compounds						Qvalue
-----						

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\05\  
 Data File : 00601006.D  
 Acq On : 5 Dec 2023 11:56 am  
 Operator : BKP  
 Sample : MDL0022-02  
 Misc :  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Dec 05 15:35:53 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Tue Dec 05 14:48:52 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) Fluorobenzene	7.652	96	1272228	20.00	ppb	0.00	
38) Chlorobenzene-d5	12.459	117	2155271	20.00	ppb	0.00	
67) 1,4-Dichlorobenzene-d4	16.522	152	985911	20.00	ppb	0.00	
System Monitoring Compounds							
2) 1,2-Dichloroethane-d4	7.160	65	475303	21.22	ppb	0.01	
Spiked Amount	20.000		Range 85 - 115				Recovery = 106.10%
24) Dibromofluoromethane	6.665	111	369618	21.30	ppb	0.00	
Spiked Amount	20.000						Recovery = 106.50%
32) Toluene-d8	10.107	98	1735785	20.57	ppb	0.00	
Spiked Amount	20.000						Recovery = 102.85%
54) Bromofluorobenzene	14.489	95	1268155	19.82	ppb	0.00	
Spiked Amount	20.000						Recovery = 99.10%
68) 1,2-Dichlorobenzene-d4	17.187	152	863493	20.55	ppb	0.00	
Spiked Amount	20.000						Recovery = 102.75%
Target Compounds							
11) Acetone	3.373	43	30902	1.70	ppb		Qvalue 83
14) Methylene chloride	3.984	84	15129	0.54	ppb		86

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\05\  
 Data File : 00701007.D  
 Acq On : 5 Dec 2023 12:26 pm  
 Operator : BKP  
 Sample : MDL0022-03  
 Misc :  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Dec 05 15:36:09 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Tue Dec 05 14:48:52 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) Fluorobenzene	7.650	96	1276139	20.00	ppb	0.00
38) Chlorobenzene-d5	12.459	117	2153616	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.522	152	981617	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.158	65	483357	21.51	ppb	0.00
Spiked Amount 20.000	Range 85 - 115		Recovery	= 107.55%		
24) Dibromofluoromethane	6.664	111	371294	21.33	ppb	0.00
Spiked Amount 20.000			Recovery	= 106.65%		
32) Toluene-d8	10.106	98	1726403	20.39	ppb	0.00
Spiked Amount 20.000			Recovery	= 101.95%		
54) Bromofluorobenzene	14.489	95	1262947	19.75	ppb	0.00
Spiked Amount 20.000			Recovery	= 98.75%		
68) 1,2-Dichlorobenzene-d4	17.187	152	855688	20.46	ppb	0.00
Spiked Amount 20.000			Recovery	= 102.30%		
Target Compounds						
11) Acetone	3.415	43	6320	Below Cal		Qvalue 94
-----						

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\05\  
 Data File : 00801008.D  
 Acq On : 5 Dec 2023 12:56 pm  
 Operator : BKP  
 Sample : MDL0022-04  
 Misc :  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Dec 05 15:53:06 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Tue Dec 05 14:48:52 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
<b>Internal Standards</b>						
1) Fluorobenzene	7.653	96	1284927	20.00	ppb	0.00
38) Chlorobenzene-d5	12.459	117	2166179	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.522	152	995880	20.00	ppb	0.00
<b>System Monitoring Compounds</b>						
2) 1,2-Dichloroethane-d4	7.161	65	481616	21.29	ppb	0.01
Spiked Amount 20.000	Range 85 - 115		Recovery	= 106.45%		
24) Dibromofluoromethane	6.666	111	369937	21.10	ppb	0.00
Spiked Amount 20.000			Recovery	= 105.50%		
32) Toluene-d8	10.107	98	1743705	20.46	ppb	0.00
Spiked Amount 20.000			Recovery	= 102.30%		
54) Bromofluorobenzene	14.489	95	1287393	20.02	ppb	0.00
Spiked Amount 20.000			Recovery	= 100.10%		
68) 1,2-Dichlorobenzene-d4	17.187	152	870436	20.51	ppb	0.00
Spiked Amount 20.000			Recovery	= 102.55%		
<b>Target Compounds</b>						<b>Qvalue</b>
3) Dichlorodifluoromethane	1.060	85	12861	1.31	ppb	97
11) Acetone	3.415	43	3941	Below Cal		84
18) 1,1-Dichloroethane	5.038	63	37939	0.57	ppb	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\05\  
 Data File : 00901009.D  
 Acq On : 5 Dec 2023 1:25 pm  
 Operator : BKP  
 Sample : MDL0022-05  
 Misc :  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Dec 05 15:53:26 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Tue Dec 05 14:48:52 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) Fluorobenzene	7.652	96	1269104	20.00	ppb	0.00
38) Chlorobenzene-d5	12.458	117	2135158	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.522	152	975865	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.159	65	472881	21.16	ppb	0.01
Spiked Amount	20.000	Range 85 - 115	Recovery	=	105.80%	
24) Dibromofluoromethane	6.664	111	370458	21.40	ppb	0.00
Spiked Amount	20.000		Recovery	=	107.00%	
32) Toluene-d8	10.106	98	1718450	20.41	ppb	0.00
Spiked Amount	20.000		Recovery	=	102.05%	
54) Bromofluorobenzene	14.489	95	1268886	20.01	ppb	0.00
Spiked Amount	20.000		Recovery	=	100.05%	
68) 1,2-Dichlorobenzene-d4	17.187	152	863802	20.77	ppb	0.00
Spiked Amount	20.000		Recovery	=	103.85%	
Target Compounds						
						Qvalue
3) Dichlorodifluoromethane	1.053	85	109133	10.18	ppb	98
10) 1,1-Dichloroethene	3.178	61	95190	2.08	ppb	89
11) Acetone	3.373	43	23825	0.94	ppb	94
18) 1,1-Dichloroethane	5.032	63	266171	4.03	ppb	96
25) 1,1,1-Trichloroethane	6.643	97	70264	1.60	ppb	71
-----						

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\05\  
 Data File : 01001010.D  
 Acq On : 5 Dec 2023 1:55 pm  
 Operator : BKP  
 Sample : MDL0022-06  
 Misc :  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Dec 05 15:54:26 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Tue Dec 05 14:48:52 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
<b>Internal Standards</b>						
1) Fluorobenzene	7.650	96	1274496	20.00	ppb	0.00
38) Chlorobenzene-d5	12.458	117	2173312	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.523	152	993735	20.00	ppb	0.00
<b>System Monitoring Compounds</b>						
2) 1,2-Dichloroethane-d4	7.157	65	477603	21.28	ppb	0.00
Spiked Amount 20.000	Range 85 - 115		Recovery	= 106.40%		
24) Dibromofluoromethane	6.664	111	374417	21.54	ppb	0.00
Spiked Amount 20.000			Recovery	= 107.70%		
32) Toluene-d8	10.105	98	1730974	20.47	ppb	0.00
Spiked Amount 20.000			Recovery	= 102.35%		
54) Bromofluorobenzene	14.488	95	1279067	19.82	ppb	0.00
Spiked Amount 20.000			Recovery	= 99.10%		
68) 1,2-Dichlorobenzene-d4	17.187	152	869108	20.53	ppb	0.00
Spiked Amount 20.000			Recovery	= 102.65%		
<b>Target Compounds</b>						
11) Acetone	3.380	43	8797	Below Cal		Qvalue 91

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\05\  
 Data File : 01101011.D  
 Acq On : 5 Dec 2023 2:24 pm  
 Operator : BKP  
 Sample : MDL0022-07  
 Misc :  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Dec 05 15:54:53 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Tue Dec 05 14:48:52 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) Fluorobenzene	7.652	96	1268417	20.00	ppb	0.00
38) Chlorobenzene-d5	12.458	117	2160800	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.522	152	979655	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.160	65	478640	21.43	ppb	0.01
Spiked Amount 20.000	Range 85 - 115		Recovery =	107.15%		
24) Dibromofluoromethane	6.665	111	369451	21.35	ppb	0.00
Spiked Amount 20.000			Recovery =	106.75%		
32) Toluene-d8	10.107	98	1727582	20.53	ppb	0.00
Spiked Amount 20.000			Recovery =	102.65%		
54) Bromofluorobenzene	14.489	95	1272589	19.83	ppb	0.00
Spiked Amount 20.000			Recovery =	99.15%		
68) 1,2-Dichlorobenzene-d4	17.186	152	856426	20.52	ppb	0.00
Spiked Amount 20.000			Recovery =	102.60%		
Target Compounds						
3) Dichlorodifluoromethane	1.057	85	12532	1.30	ppb	100
11) Acetone	3.394	43	6848	Below Cal		98
18) 1,1-Dichloroethane	5.037	63	38229	0.58	ppb	95
-----						

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\05\  
 Data File : 01201012.D  
 Acq On : 5 Dec 2023 2:53 pm  
 Operator : BKP  
 Sample : MDL0022-09  
 Misc :  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Dec 05 15:55:19 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Tue Dec 05 14:48:52 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) Fluorobenzene	7.651	96	1254755	20.00	ppb	0.00
38) Chlorobenzene-d5	12.459	117	2132168	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.524	152	973500	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.159	65	471978	21.36	ppb	0.01
Spiked Amount 20.000	Range 85 - 115		Recovery	= 106.80%		
24) Dibromofluoromethane	6.665	111	372261	21.75	ppb	0.00
Spiked Amount 20.000			Recovery	= 108.75%		
32) Toluene-d8	10.107	98	1704182	20.47	ppb	0.00
Spiked Amount 20.000			Recovery	= 102.35%		
54) Bromofluorobenzene	14.490	95	1257729	19.87	ppb	0.00
Spiked Amount 20.000			Recovery	= 99.35%		
68) 1,2-Dichlorobenzene-d4	17.187	152	857767	20.68	ppb	0.00
Spiked Amount 20.000			Recovery	= 103.40%		
Target Compounds						
						Qvalue
3) Dichlorodifluoromethane	1.053	85	243909	27.17	ppb	99
10) 1,1-Dichloroethene	3.178	61	215620	4.76	ppb	88
11) Acetone	3.387	43	9777	Below Cal		86
18) 1,1-Dichloroethane	5.033	63	373651	5.72	ppb	98
25) 1,1,1-Trichloroethane	6.644	97	122303	2.81	ppb	81
-----						

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\05\  
 Data File : 01301013.D  
 Acq On : 5 Dec 2023 3:23 pm  
 Operator : BKP  
 Sample : MDL0022-10  
 Misc :  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Dec 05 15:55:43 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Tue Dec 05 14:48:52 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	7.650	96	1255236	20.00	ppb	0.00
38) Chlorobenzene-d5	12.458	117	2145162	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.523	152	979721	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.157	65	475182	21.50	ppb	0.00
Spiked Amount 20.000	Range 85 - 115		Recovery	= 107.50%		
24) Dibromofluoromethane	6.663	111	372989	21.78	ppb	0.00
Spiked Amount 20.000			Recovery	= 108.90%		
32) Toluene-d8	10.106	98	1713083	20.57	ppb	0.00
Spiked Amount 20.000			Recovery	= 102.85%		
54) Bromofluorobenzene	14.488	95	1254720	19.70	ppb	0.00
Spiked Amount 20.000			Recovery	= 98.50%		
68) 1,2-Dichlorobenzene-d4	17.187	152	860002	20.60	ppb	0.00
Spiked Amount 20.000			Recovery	= 103.00%		
Target Compounds						Qvalue
11) Acetone	3.387	43	13264	Below Cal		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\05\  
 Data File : 01401014.D  
 Acq On : 5 Dec 2023 3:52 pm  
 Operator : BKP  
 Sample : MDL0022-08  
 Misc :  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Dec 06 09:31:41 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Tue Dec 05 14:48:52 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) Fluorobenzene	7.651	96	1262131	20.00	ppb	0.00
38) Chlorobenzene-d5	12.459	117	2161297	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.521	152	970170	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.159	65	481749	21.68	ppb	0.01
Spiked Amount 20.000	Range 85 - 115		Recovery	= 108.40%		
24) Dibromofluoromethane	6.663	111	369647	21.47	ppb	0.00
Spiked Amount 20.000			Recovery	= 107.35%		
32) Toluene-d8	10.107	98	1720920	20.55	ppb	0.00
Spiked Amount 20.000			Recovery	= 102.75%		
54) Bromofluorobenzene	14.489	95	1266416	19.73	ppb	0.00
Spiked Amount 20.000			Recovery	= 98.65%		
68) 1,2-Dichlorobenzene-d4	17.187	152	864781	20.92	ppb	0.00
Spiked Amount 20.000			Recovery	= 104.60%		
Target Compounds						
11) Acetone	3.394	43	5371	Below Cal		Qvalue 99
-----						

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\05\  
 Data File : 01501015.D  
 Acq On : 5 Dec 2023 4:22 pm  
 Operator : BKP  
 Sample : MDL0022-01 MS  
 Misc :  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: Dec 06 10:09:33 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Tue Dec 05 14:48:52 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
<b>Internal Standards</b>							
1) Fluorobenzene	7.649	96	1342727	20.00	ppb	0.00	
38) Chlorobenzene-d5	12.457	117	2243108	20.00	ppb	0.00	
67) 1,4-Dichlorobenzene-d4	16.521	152	1073066	20.00	ppb	0.00	
<b>System Monitoring Compounds</b>							
2) 1,2-Dichloroethane-d4	7.153	65	477183	20.18	ppb	0.00	
Spiked Amount	20.000	Range 85 - 115	Recovery	=	100.90%		
24) Dibromofluoromethane	6.661	111	390190	21.30	ppb	0.00	
Spiked Amount	20.000		Recovery	=	106.50%		
32) Toluene-d8	10.104	98	1873219	21.03	ppb	0.00	
Spiked Amount	20.000		Recovery	=	105.15%		
54) Bromofluorobenzene	14.487	95	1364524	20.49	ppb	0.00	
Spiked Amount	20.000		Recovery	=	102.45%		
68) 1,2-Dichlorobenzene-d4	17.186	152	899084	19.66	ppb	0.00	
Spiked Amount	20.000		Recovery	=	98.30%		
<b>Target Compounds</b>							
3) Dichlorodifluoromethane	1.050	85	111217	9.78	ppb		Qvalue 100
4) Chloromethane	1.258	50	241695	10.61	ppb		99
5) Vinyl chloride	1.407	62	328867	11.21	ppb		99
6) Bromomethane	1.880	96	134659	12.43	ppb		97
7) Chloroethane	2.025	64	210824	11.52	ppb		99
8) Trichlorofluoromethane	2.392	101	413375	11.60	ppb		94
9) Diethyl ether	2.863	59	369526	10.17	ppb		87
10) 1,1-Dichloroethene	3.178	61	521616	10.75	ppb		90
11) Acetone	3.345	43	152044	13.92	ppb		87
12) Methyl iodide	3.401	142	240574	10.62	ppb		91
13) Carbon disulfide	3.470	76	968698	11.32	ppb		100
14) Methylene chloride	3.972	84	335122	11.43	ppb		92
15) MTBE (2-methoxy-2-meth...	4.400	73	1251315	9.99	ppb		91
16) trans-1,2-Dichloroethene	4.379	61	583094	10.67	ppb	#	78
17) Acrylonitrile	4.458	53	141004	11.05	ppb		99
18) 1,1-Dichloroethane	5.028	63	740512	10.59	ppb		96
19) Methyl ethyl ketone	6.023	43	226325	10.58	ppb		90
20) 2,2-Dichloropropane	5.891	77	516557	10.53	ppb		97
21) cis-1,2-Dichloroethene	5.923	96	359738	10.62	ppb		99
22) Bromochloromethane	6.279	130	203742	11.01	ppb		97
23) Chloroform	6.415	83	625362	10.65	ppb		96
25) 1,1,1-Trichloroethane	6.642	97	505430	10.86	ppb		79
26) 1,1-Dichloropropene	6.896	75	562280	10.99	ppb		75
27) Carbon tetrachloride	6.879	117	387785	11.46	ppb		97
28) Benzene	7.208	78	1692608	10.68	ppb		99
29) 1,2-Dichloroethane	7.269	62	566371	10.59	ppb		97
30) Trichloroethene	8.202	130	341495	10.85	ppb	#	84
31) 1,2-Dichloropropane	8.553	63	459015	10.40	ppb		97
33) Dibromomethane	8.744	174	189230	10.82	ppb	#	41
34) Bromodichloromethane	9.000	83	465812	10.64	ppb		94
35) cis-1,3-Dichloropropene	9.709	75	626835	9.78	ppb		77
36) Methyl isobutyl ketone	9.994	43	567928	10.25	ppb		91

37)	Toluene	10.208	91	1523880	10.76	ppb	98
39)	trans-1,3-Dichloropropene	10.619	75	549774	9.19	ppb	79
40)	1,1,2-Trichloroethane	10.897	97	333422	9.90	ppb	88
41)	Tetrachloroethene	11.070	166	306505	9.85	ppb	90
42)	2-Hexanone	11.367	43	364610	9.77	ppb	86
43)	1,3-Dichloropropane	11.162	76	653437	9.76	ppb	100
44)	Dibromochloromethane	11.517	129	274988	9.53	ppb	91
45)	1,2-Dibromoethane	11.686	107	301925	9.88	ppb	98
46)	Chlorobenzene	12.504	112	777725	9.87	ppb	# 77
47)	1,1,1,2-Tetrachloroethane	12.658	131	255368	9.88	ppb	96
48)	Ethylbenzene	12.708	91	1383601	10.00	ppb	90
49)	m+p-Xylene	12.912	91	2056651	20.55	ppb	87
50)	o-Xylene	13.582	91	965977	10.01	ppb	88
51)	Styrene	13.617	104	731974	9.34	ppb	78
52)	Bromoform	13.916	173	124097	8.70	ppb	94
53)	Isopropylbenzene	14.232	105	958222	10.18	ppb	95
55)	Bromobenzene	14.724	156	219618	9.75	ppb	# 41
56)	n-Propylbenzene	14.953	91	1177439	10.39	ppb	# 86
57)	1,3,5-Trimethylbenzene	15.280	105	660725	10.41	ppb	96
58)	2-Chlorotoluene	15.075	91	674532	10.18	ppb	# 77
59)	4-Chlorotoluene	15.279	91	778706m	10.42	ppb	
60)	tert-Butylbenzene	15.842	91	359630	10.23	ppb	# 73
61)	1,1,2,2-Tetrachloroethane	14.801	83	349122	10.05	ppb	90
62)	trans-1,4-Dichloro-2-b...	14.917	53	111678	9.31	ppb	91
63)	1,2,3-Trichloropropane	14.851	110	101646	10.11	ppb	100
64)	1,2,4-Trimethylbenzene	15.934	105	633937	10.40	ppb	94
65)	sec-Butylbenzene	16.234	105	748306	10.47	ppb	# 90
66)	4-Isopropyltoluene	16.513	119	580530	10.34	ppb	# 92
69)	1,3-Dichlorobenzene	16.398	146	313151	9.61	ppb	92
70)	1,4-Dichlorobenzene	16.562	146	327888	9.59	ppb	95
71)	1,2-Dichlorobenzene	17.219	146	289511	9.62	ppb	91
72)	n-butylbenzene	17.248	91	505011	10.17	ppb	# 89
73)	1,2-Dibromo-3-chloropr...	18.652	157	33999	9.26	ppb	98
74)	1,2,4-Trichlorobenzene	20.137	180	109441	8.75	ppb	99
75)	Hexachlorobutadiene	20.470	225	50910	9.87	ppb	95
76)	Naphthalene	20.575	128	332144	9.03	ppb	87
77)	1,2,3-Trichlorobenzene	21.017	180	105231	9.24	ppb	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\05\  
 Data File : 01601016.D  
 Acq On : 5 Dec 2023 4:51 pm  
 Operator : BKP  
 Sample : MDL0022-01 MSD  
 Misc :  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: Dec 06 09:32:44 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Tue Dec 05 14:48:52 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev (Min)	
<b>Internal Standards</b>							
1) Fluorobenzene	7.652	96	1351778	20.00	ppb	0.00	
38) Chlorobenzene-d5	12.458	117	2244732	20.00	ppb	0.00	
67) 1,4-Dichlorobenzene-d4	16.521	152	1067921	20.00	ppb	0.00	
<b>System Monitoring Compounds</b>							
2) 1,2-Dichloroethane-d4	7.155	65	483170	20.30	ppb	0.00	
Spiked Amount	20.000	Range 85 - 115	Recovery	=	101.50%		
24) Dibromofluoromethane	6.664	111	389028	21.10	ppb	0.00	
Spiked Amount	20.000		Recovery	=	105.50%		
32) Toluene-d8	10.105	98	1883369	21.00	ppb	0.00	
Spiked Amount	20.000		Recovery	=	105.00%		
54) Bromofluorobenzene	14.488	95	1352559	20.29	ppb	0.00	
Spiked Amount	20.000		Recovery	=	101.45%		
68) 1,2-Dichlorobenzene-d4	17.187	152	905459	19.90	ppb	0.00	
Spiked Amount	20.000		Recovery	=	99.50%		
<b>Target Compounds</b>							
							Qvalue
3) Dichlorodifluoromethane	1.057	85	109438	9.54	ppb		97
4) Chloromethane	1.264	50	244586	10.66	ppb		100
5) Vinyl chloride	1.413	62	329240	11.15	ppb		99
6) Bromomethane	1.886	96	135838	12.46	ppb		98
7) Chloroethane	2.032	64	208204	11.27	ppb		98
8) Trichlorofluoromethane	2.395	101	406395	11.32	ppb		96
9) Diethyl ether	2.869	59	377943	10.33	ppb		90
10) 1,1-Dichloroethene	3.179	61	520177	10.65	ppb		89
11) Acetone	3.345	43	152692	13.88	ppb		79
12) Methyl iodide	3.408	142	242703	10.64	ppb		92
13) Carbon disulfide	3.477	76	960905	11.15	ppb		100
14) Methylene chloride	3.977	84	338497	11.47	ppb		93
15) MTBE (2-methoxy-2-meth...	4.405	73	1288746	10.22	ppb		91
16) trans-1,2-Dichloroethene	4.383	61	579324	10.53	ppb	#	76
17) Acrylonitrile	4.463	53	141337	11.01	ppb		91
18) 1,1-Dichloroethane	5.032	63	742621	10.55	ppb		97
19) Methyl ethyl ketone	6.026	43	227182	10.55	ppb		91
20) 2,2-Dichloropropane	5.895	77	521416	10.56	ppb		98
21) cis-1,2-Dichloroethene	5.926	96	355264	10.42	ppb		97
22) Bromochloromethane	6.281	130	204197	10.96	ppb		99
23) Chloroform	6.419	83	627602	10.62	ppb		95
25) 1,1,1-Trichloroethane	6.645	97	499975	10.67	ppb		80
26) 1,1-Dichloropropene	6.900	75	560848	10.89	ppb		72
27) Carbon tetrachloride	6.882	117	381127	11.19	ppb		98
28) Benzene	7.211	78	1683908	10.56	ppb		99
29) 1,2-Dichloroethane	7.271	62	572247	10.62	ppb		96
30) Trichloroethene	8.205	130	338736	10.69	ppb	#	83
31) 1,2-Dichloropropane	8.555	63	463555	10.44	ppb		96
33) Dibromomethane	8.747	174	188758	10.72	ppb	#	33
34) Bromodichloromethane	9.001	83	470737	10.68	ppb		93
35) cis-1,3-Dichloropropene	9.711	75	637285	9.88	ppb		77
36) Methyl isobutyl ketone	9.995	43	575665	10.32	ppb		88

37)	Toluene	10.210	91	1503140	10.55	ppb	100
39)	trans-1,3-Dichloropropene	10.620	75	558090	9.32	ppb	80
40)	1,1,2-Trichloroethane	10.898	97	332405	9.87	ppb	87
41)	Tetrachloroethene	11.071	166	300605	9.66	ppb	88
42)	2-Hexanone	11.368	43	365768	9.80	ppb	87
43)	1,3-Dichloropropane	11.162	76	657764	9.82	ppb	99
44)	Dibromochloromethane	11.518	129	279301	9.67	ppb	96
45)	1,2-Dibromoethane	11.687	107	304500	9.96	ppb	98
46)	Chlorobenzene	12.505	112	769609	9.76	ppb #	79
47)	1,1,1,2-Tetrachloroethane	12.658	131	256147	9.90	ppb	99
48)	Ethylbenzene	12.709	91	1368002	9.88	ppb	91
49)	m+p-Xylene	12.913	91	2022549	20.19	ppb	88
50)	o-Xylene	13.583	91	953162	9.87	ppb	92
51)	Styrene	13.618	104	734749	9.37	ppb	80
52)	Bromoform	13.917	173	127344	8.92	ppb	92
53)	Isopropylbenzene	14.233	105	943488	10.01	ppb	98
55)	Bromobenzene	14.724	156	217665	9.66	ppb #	37
56)	n-Propylbenzene	14.954	91	1144620	10.10	ppb #	87
57)	1,3,5-Trimethylbenzene	15.281	105	644208	10.14	ppb	94
58)	2-Chlorotoluene	15.076	91	662619	9.99	ppb #	76
59)	4-Chlorotoluene	15.278	91	746685	9.99	ppb #	81
60)	tert-Butylbenzene	15.842	91	347907	9.89	ppb #	74
61)	1,1,2,2-Tetrachloroethane	14.801	83	346327	9.96	ppb	93
62)	trans-1,4-Dichloro-2-b...	14.918	53	112512	9.37	ppb	93
63)	1,2,3-Trichloropropane	14.852	110	99200	9.86	ppb	93
64)	1,2,4-Trimethylbenzene	15.934	105	617748	10.12	ppb	92
65)	sec-Butylbenzene	16.235	105	723790	10.12	ppb #	89
66)	4-Isopropyltoluene	16.513	119	568003	10.11	ppb #	93
69)	1,3-Dichlorobenzene	16.399	146	315998	9.75	ppb	95
70)	1,4-Dichlorobenzene	16.562	146	322628	9.48	ppb	95
71)	1,2-Dichlorobenzene	17.219	146	280719	9.37	ppb	92
72)	n-butylbenzene	17.248	91	494197	10.00	ppb #	90
73)	1,2-Dibromo-3-chloropr...	18.653	157	34708	9.50	ppb	97
74)	1,2,4-Trichlorobenzene	20.139	180	110373	8.87	ppb	94
75)	Hexachlorobutadiene	20.470	225	48911	9.53	ppb	94
76)	Naphthalene	20.577	128	334867	9.15	ppb	86
77)	1,2,3-Trichlorobenzene	21.017	180	104067	9.18	ppb	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\05\  
 Data File : 01801018.D  
 Acq On : 5 Dec 2023 5:49 pm  
 Operator : BKP  
 Sample : MDL0045-02  
 Misc :  
 ALS Vial : 18 Sample Multiplier: 1

Quant Time: Dec 06 09:33:19 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Tue Dec 05 14:48:52 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) Fluorobenzene	7.652	96	1296324	20.00	ppb	0.00
38) Chlorobenzene-d5	12.459	117	2183062	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.523	152	990903	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.160	65	488226	21.39	ppb	0.01
Spiked Amount	20.000	Range 85 - 115	Recovery	=	106.95%	
24) Dibromofluoromethane	6.666	111	378684	21.41	ppb	0.00
Spiked Amount	20.000		Recovery	=	107.05%	
32) Toluene-d8	10.107	98	1762103	20.49	ppb	0.00
Spiked Amount	20.000		Recovery	=	102.45%	
54) Bromofluorobenzene	14.490	95	1284783	19.82	ppb	0.00
Spiked Amount	20.000		Recovery	=	99.10%	
68) 1,2-Dichlorobenzene-d4	17.188	152	858162	20.33	ppb	0.00
Spiked Amount	20.000		Recovery	=	101.65%	
Target Compounds						
11) Acetone	3.366	43	27654	1.29	ppb	Qvalue 88
-----						

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\05\  
 Data File : 01901019.D  
 Acq On : 5 Dec 2023 6:18 pm  
 Operator : BKP  
 Sample : MDL0045-04  
 Misc :  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: Dec 06 09:34:23 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Tue Dec 05 14:48:52 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	7.650	96	1260055	20.00	ppb	0.00
38) Chlorobenzene-d5	12.459	117	2121568	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.524	152	953149	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.158	65	479253	21.60	ppb	0.00
Spiked Amount 20.000	Range 85 - 115		Recovery	= 108.00%		
24) Dibromofluoromethane	6.664	111	373543	21.73	ppb	0.00
Spiked Amount 20.000			Recovery	= 108.65%		
32) Toluene-d8	10.107	98	1710155	20.46	ppb	0.00
Spiked Amount 20.000			Recovery	= 102.30%		
54) Bromofluorobenzene	14.489	95	1233702	19.58	ppb	0.00
Spiked Amount 20.000			Recovery	= 97.90%		
68) 1,2-Dichlorobenzene-d4	17.188	152	839656	20.67	ppb	0.00
Spiked Amount 20.000			Recovery	= 103.35%		
Target Compounds						Qvalue
4) Chloromethane	1.258	50	12731	0.60	ppb	92
11) Acetone	3.366	43	31680	1.81	ppb	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\05\  
 Data File : 02001020.D  
 Acq On : 5 Dec 2023 6:48 pm  
 Operator : BKP  
 Sample : MDK0724-01  
 Misc :  
 ALS Vial : 20 Sample Multiplier: 1

Quant Time: Dec 06 09:35:03 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Tue Dec 05 14:48:52 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) Fluorobenzene	7.652	96	1252033	20.00	ppb	0.00
38) Chlorobenzene-d5	12.459	117	2129351	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.523	152	961935	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.160	65	474201	21.51	ppb	0.01
Spiked Amount 20.000	Range 85 - 115		Recovery	= 107.55%		
24) Dibromofluoromethane	6.666	111	367021	21.49	ppb	0.00
Spiked Amount 20.000			Recovery	= 107.45%		
32) Toluene-d8	10.107	98	1696163	20.42	ppb	0.00
Spiked Amount 20.000			Recovery	= 102.10%		
54) Bromofluorobenzene	14.490	95	1252771	19.81	ppb	0.00
Spiked Amount 20.000			Recovery	= 99.05%		
68) 1,2-Dichlorobenzene-d4	17.188	152	843329	20.58	ppb	0.00
Spiked Amount 20.000			Recovery	= 102.90%		
Target Compounds						
11) Acetone	3.380	43	1894	Below Cal		Qvalue 96
-----						

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\05\  
 Data File : 02101021.D  
 Acq On : 5 Dec 2023 7:17 pm  
 Operator : BKP  
 Sample : MDL0045-01  
 Misc : 1000X  
 ALS Vial : 21 Sample Multiplier: 1

Quant Time: Dec 06 09:35:27 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Tue Dec 05 14:48:52 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) Fluorobenzene	7.654	96	1267393	20.00	ppb	0.00
38) Chlorobenzene-d5	12.460	117	2160058	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.523	152	961324	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.161	65	481001	21.55	ppb	0.01
Spiked Amount 20.000	Range 85 - 115		Recovery	= 107.75%		
24) Dibromofluoromethane	6.668	111	375793	21.74	ppb	0.01
Spiked Amount 20.000			Recovery	= 108.70%		
32) Toluene-d8	10.108	98	1732950	20.61	ppb	0.00
Spiked Amount 20.000			Recovery	= 103.05%		
54) Bromofluorobenzene	14.490	95	1261718	19.67	ppb	0.00
Spiked Amount 20.000			Recovery	= 98.35%		
68) 1,2-Dichlorobenzene-d4	17.188	152	847965	20.70	ppb	0.00
Spiked Amount 20.000			Recovery	= 103.50%		
Target Compounds						
11) Acetone	3.394	43	51048m	3.89	ppb	Qvalue
-----						

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\05\  
 Data File : 02201022.D  
 Acq On : 5 Dec 2023 7:46 pm  
 Operator : BKP  
 Sample : MDL0045-03  
 Misc : 1000X  
 ALS Vial : 22 Sample Multiplier: 1

Quant Time: Dec 06 09:35:52 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Tue Dec 05 14:48:52 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) Fluorobenzene	7.652	96	1239623	20.00	ppb	0.00
38) Chlorobenzene-d5	12.459	117	2111188	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.523	152	941353	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.159	65	471969	21.62	ppb	0.01
Spiked Amount 20.000	Range 85 - 115		Recovery	= 108.10%		
24) Dibromofluoromethane	6.665	111	369616	21.86	ppb	0.00
Spiked Amount 20.000			Recovery	= 109.30%		
32) Toluene-d8	10.107	98	1675010	20.37	ppb	0.00
Spiked Amount 20.000			Recovery	= 101.85%		
54) Bromofluorobenzene	14.489	95	1215580	19.39	ppb	0.00
Spiked Amount 20.000			Recovery	= 96.95%		
68) 1,2-Dichlorobenzene-d4	17.187	152	832089	20.74	ppb	0.00
Spiked Amount 20.000			Recovery	= 103.70%		
Target Compounds						Qvalue
11) Acetone	3.338	43	205469	21.13	ppb	78
-----						

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\05\  
 Data File : 02301023.D  
 Acq On : 5 Dec 2023 8:15 pm  
 Operator : BKP  
 Sample : MDL0045-01  
 Misc : 100X  
 ALS Vial : 23 Sample Multiplier: 1

Quant Time: Dec 06 09:36:28 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Tue Dec 05 14:48:52 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
-----							
Internal Standards							
1) Fluorobenzene	7.653	96	1245082	20.00	ppb	0.00	
38) Chlorobenzene-d5	12.459	117	2100479	20.00	ppb	0.00	
67) 1,4-Dichlorobenzene-d4	16.523	152	948235	20.00	ppb	0.00	
System Monitoring Compounds							
2) 1,2-Dichloroethane-d4	7.161	65	474345	21.64	ppb	0.01	
Spiked Amount	20.000	Range 85 - 115	Recovery	=	108.20%		
24) Dibromofluoromethane	6.667	111	370004	21.78	ppb	0.00	
Spiked Amount	20.000		Recovery	=	108.90%		
32) Toluene-d8	10.108	98	1690690	20.47	ppb	0.00	
Spiked Amount	20.000		Recovery	=	102.35%		
54) Bromofluorobenzene	14.489	95	1223506	19.62	ppb	0.00	
Spiked Amount	20.000		Recovery	=	98.10%		
68) 1,2-Dichlorobenzene-d4	17.188	152	834033	20.64	ppb	0.00	
Spiked Amount	20.000		Recovery	=	103.20%		
Target Compounds							
11) Acetone	3.359	43	397081m	42.18	ppb		Qvalue
19) Methyl ethyl ketone	6.046	43	26596	1.36	ppb		94
-----							

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\05\  
 Data File : 02401024.D  
 Acq On : 5 Dec 2023 8:44 pm  
 Operator : BKP  
 Sample : MDL0045-03  
 Misc : 100X  
 ALS Vial : 24 Sample Multiplier: 1

Quant Time: Dec 06 09:36:49 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Tue Dec 05 14:48:52 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) Fluorobenzene	7.650	96	1286870	20.00	ppb	0.00
38) Chlorobenzene-d5	12.459	117	2182459	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.524	152	969068	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.157	65	489914	21.62	ppb	0.00
Spiked Amount	20.000	Range 85 - 115	Recovery	=	108.10%	
24) Dibromofluoromethane	6.662	111	378763	21.58	ppb	0.00
Spiked Amount	20.000		Recovery	=	107.90%	
32) Toluene-d8	10.106	98	1745895	20.45	ppb	0.00
Spiked Amount	20.000		Recovery	=	102.25%	
54) Bromofluorobenzene	14.490	95	1269687	19.59	ppb	0.00
Spiked Amount	20.000		Recovery	=	97.95%	
68) 1,2-Dichlorobenzene-d4	17.188	152	843128	20.42	ppb	0.00
Spiked Amount	20.000		Recovery	=	102.10%	
Target Compounds						
4) Chloromethane	1.258	50	12826	0.59	ppb	99
11) Acetone	3.317	43	2468389	261.92	ppb	80
19) Methyl ethyl ketone	6.026	43	106841	5.25	ppb	87
-----						

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\05\  
 Data File : 02501025.D  
 Acq On : 5 Dec 2023 9:13 pm  
 Operator : BKP  
 Sample : MDL0045-01  
 Misc : 10X  
 ALS Vial : 25 Sample Multiplier: 1

Quant Time: Dec 06 09:37:20 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Tue Dec 05 14:48:52 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) Fluorobenzene	7.651	96	1297028	20.00	ppb	0.00
38) Chlorobenzene-d5	12.459	117	2184770	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.523	152	975012	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.158	65	484109	21.20	ppb	0.00
Spiked Amount	20.000	Range 85 - 115	Recovery	=	106.00%	
24) Dibromofluoromethane	6.663	111	377549	21.34	ppb	0.00
Spiked Amount	20.000		Recovery	=	106.70%	
32) Toluene-d8	10.106	98	1777589	20.66	ppb	0.00
Spiked Amount	20.000		Recovery	=	103.30%	
54) Bromofluorobenzene	14.489	95	1264759	19.50	ppb	0.00
Spiked Amount	20.000		Recovery	=	97.50%	
68) 1,2-Dichlorobenzene-d4	17.188	152	856799	20.62	ppb	0.00
Spiked Amount	20.000		Recovery	=	103.10%	
Target Compounds						
						Qvalue
4) Chloromethane	1.264	50	18770	0.85	ppb	98
11) Acetone	3.317	43	5034234	531.67	ppb	80
19) Methyl ethyl ketone	6.010	43	567130	26.82	ppb	88
36) Methyl isobutyl ketone	10.005	43	36398	0.66	ppb	100
42) 2-Hexanone	11.370	43	35991	0.98	ppb	93
-----						

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\05\  
 Data File : 02601026.D  
 Acq On : 5 Dec 2023 9:42 pm  
 Operator : BKP  
 Sample : MDL0045-03  
 Misc : 10X  
 ALS Vial : 26 Sample Multiplier: 1

Quant Time: Dec 06 09:37:50 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Tue Dec 05 14:48:52 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) Fluorobenzene	7.654	96	1338846	20.00	ppb	0.00
38) Chlorobenzene-d5	12.459	117	2191504	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.523	152	973433	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.161	65	495995	21.04	ppb	0.01
Spiked Amount	20.000	Range 85 - 115	Recovery	=	105.20%	
24) Dibromofluoromethane	6.667	111	385143	21.09	ppb	0.00
Spiked Amount	20.000		Recovery	=	105.45%	
32) Toluene-d8	10.108	98	1775064	19.99	ppb	0.00
Spiked Amount	20.000		Recovery	=	99.95%	
54) Bromofluorobenzene	14.490	95	1280354	19.68	ppb	0.00
Spiked Amount	20.000		Recovery	=	98.40%	
68) 1,2-Dichlorobenzene-d4	17.188	152	854717	20.61	ppb	0.00
Spiked Amount	20.000		Recovery	=	103.05%	
Target Compounds						
4) Chloromethane	1.274	50	125921	5.54	ppb	99
11) Acetone	3.331	43	24181584m	2480.05	ppb	
19) Methyl ethyl ketone	6.002	43	1744032	74.82	ppb	87
-----						

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\05\  
 Data File : 02801028.D  
 Acq On : 5 Dec 2023 10:40 pm  
 Operator : BKP  
 Sample : 10 PPB VOC CCV 2  
 Misc :  
 ALS Vial : 28 Sample Multiplier: 1

Quant Time: Dec 06 09:40:15 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Tue Dec 05 14:48:52 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
<b>Internal Standards</b>							
1) Fluorobenzene	7.653	96	1308797	20.00	ppb	0.00	
38) Chlorobenzene-d5	12.460	117	2143922	20.00	ppb	0.00	
67) 1,4-Dichlorobenzene-d4	16.523	152	1008857	20.00	ppb	0.00	
<b>System Monitoring Compounds</b>							
2) 1,2-Dichloroethane-d4	7.157	65	472607	20.51	ppb	0.00	
Spiked Amount 20.000		Range 85 - 115	Recovery	=	102.55%		
24) Dibromofluoromethane	6.665	111	376275	21.07	ppb	0.00	
Spiked Amount 20.000			Recovery	=	105.35%		
32) Toluene-d8	10.107	98	1810826	20.86	ppb	0.00	
Spiked Amount 20.000			Recovery	=	104.30%		
54) Bromofluorobenzene	14.490	95	1288826	20.25	ppb	0.00	
Spiked Amount 20.000			Recovery	=	101.25%		
68) 1,2-Dichlorobenzene-d4	17.188	152	855689	19.91	ppb	0.00	
Spiked Amount 20.000			Recovery	=	99.55%		
<b>Target Compounds</b>							
							Qvalue
3) Dichlorodifluoromethane	1.057	85	92863	8.30	ppb		100
4) Chloromethane	1.267	50	204953	9.23	ppb		100
5) Vinyl chloride	1.416	62	271921	9.51	ppb		99
6) Bromomethane	1.876	96	99432	8.91	ppb		95
7) Chloroethane	2.032	64	165132	9.02	ppb		98
8) Trichlorofluoromethane	2.398	101	337039	9.70	ppb		97
9) Diethyl ether	2.870	59	337074	9.51	ppb		90
10) 1,1-Dichloroethene	3.185	61	442947	9.37	ppb		90
11) Acetone	3.373	43	110199m	9.93	ppb		
12) Methyl iodide	3.408	142	185791m	8.33	ppb		
13) Carbon disulfide	3.477	76	802223	9.62	ppb		100
14) Methylene chloride	3.981	84	263689	9.23	ppb		95
15) MTBE (2-methoxy-2-meth...	4.407	73	1105850	9.06	ppb		89
16) trans-1,2-Dichloroethene	4.385	61	489365	9.19	ppb	#	77
17) Acrylonitrile	4.468	53	119101	9.58	ppb		96
18) 1,1-Dichloroethane	5.035	63	631161	9.26	ppb		97
19) Methyl ethyl ketone	6.031	43	184013	8.85	ppb		86
20) 2,2-Dichloropropane	5.896	77	422348	8.84	ppb		99
21) cis-1,2-Dichloroethene	5.927	96	302269	9.15	ppb		97
22) Bromochloromethane	6.284	130	170940	9.47	ppb		98
23) Chloroform	6.421	83	539311	9.42	ppb		95
25) 1,1,1-Trichloroethane	6.646	97	432568	9.54	ppb		82
26) 1,1-Dichloropropene	6.901	75	466837	9.36	ppb		74
27) Carbon tetrachloride	6.884	117	315476	9.56	ppb		99
28) Benzene	7.212	78	1430494	9.26	ppb		99
29) 1,2-Dichloroethane	7.273	62	497106	9.53	ppb		97
30) Trichloroethene	8.206	130	286817	9.35	ppb	#	83
31) 1,2-Dichloropropane	8.556	63	397316	9.24	ppb		96
33) Dibromomethane	8.747	174	160021	9.39	ppb	#	39
34) Bromodichloromethane	9.003	83	402479	9.43	ppb		93
35) cis-1,3-Dichloropropene	9.713	75	532839	8.49	ppb		78
36) Methyl isobutyl ketone	9.997	43	466578	8.59	ppb		89

37)	Toluene	10.211	91	1266659	9.18	ppb	99
39)	trans-1,3-Dichloropropene	10.622	75	469910	8.20	ppb	77
40)	1,1,2-Trichloroethane	10.900	97	287822	8.94	ppb #	86
41)	Tetrachloroethene	11.073	166	252758	8.50	ppb	91
42)	2-Hexanone	11.371	43	287481	8.05	ppb	88
43)	1,3-Dichloropropane	11.164	76	567820	8.87	ppb	98
44)	Dibromochloromethane	11.520	129	236810	8.58	ppb	100
45)	1,2-Dibromoethane	11.689	107	260521	8.92	ppb	99
46)	Chlorobenzene	12.506	112	648064	8.61	ppb #	76
47)	1,1,1,2-Tetrachloroethane	12.660	131	212593	8.60	ppb	93
48)	Ethylbenzene	12.711	91	1132425	8.56	ppb	88
49)	m+p-Xylene	12.914	91	1672325	17.48	ppb	88
50)	o-Xylene	13.584	91	783789	8.50	ppb	88
51)	Styrene	13.619	104	609898	8.11	ppb	84
52)	Bromoform	13.918	173	106254	7.79	ppb	100
53)	Isopropylbenzene	14.235	105	770508	8.56	ppb	98
55)	Bromobenzene	14.725	156	181884	8.45	ppb #	41
56)	n-Propylbenzene	14.955	91	933163	8.62	ppb #	88
57)	1,3,5-Trimethylbenzene	15.282	105	531555	8.76	ppb	96
58)	2-Chlorotoluene	15.077	91	540378	8.53	ppb #	76
59)	4-Chlorotoluene	15.280	91	616212	8.63	ppb #	79
60)	tert-Butylbenzene	15.844	91	283715	8.45	ppb #	76
61)	1,1,2,2-Tetrachloroethane	14.803	83	287274	8.65	ppb	92
62)	trans-1,4-Dichloro-2-b...	14.919	53	88674	7.72	ppb	93
63)	1,2,3-Trichloropropane	14.853	110	83634	8.70	ppb	96
64)	1,2,4-Trimethylbenzene	15.936	105	506025	8.68	ppb	93
65)	sec-Butylbenzene	16.237	105	582714	8.53	ppb #	90
66)	4-Isopropyltoluene	16.515	119	459537	8.57	ppb #	91
69)	1,3-Dichlorobenzene	16.400	146	256412	8.37	ppb	96
70)	1,4-Dichlorobenzene	16.564	146	267812	8.33	ppb	95
71)	1,2-Dichlorobenzene	17.221	146	235609	8.33	ppb	92
72)	n-butylbenzene	17.250	91	393655	8.43	ppb #	87
73)	1,2-Dibromo-3-chloropr...	18.655	157	27048	7.82	ppb	85
74)	1,2,4-Trichlorobenzene	20.140	180	91921	7.82	ppb	96
75)	Hexachlorobutadiene	20.472	225	39837	8.21	ppb	100
76)	Naphthalene	20.577	128	267538	7.74	ppb	85
77)	1,2,3-Trichlorobenzene	21.019	180	88084	8.23	ppb	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\05\  
 Data File : 03001030.D  
 Acq On : 5 Dec 2023 11:39 pm  
 Operator : BKP  
 Sample : MDK0690-01  
 Misc : 100X  
 ALS Vial : 30 Sample Multiplier: 1

Quant Time: Dec 06 09:25:17 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Tue Dec 05 14:48:52 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
-----							
Internal Standards							
1) Fluorobenzene	7.652	96	1273567	20.00	ppb	0.00	
38) Chlorobenzene-d5	12.460	117	2115003	20.00	ppb	0.00	
67) 1,4-Dichlorobenzene-d4	16.523	152	983191	20.00	ppb	0.00	
System Monitoring Compounds							
2) 1,2-Dichloroethane-d4	7.159	65	471185	21.01	ppb	0.01	
Spiked Amount	20.000	Range 85 - 115	Recovery	=	105.05%		
24) Dibromofluoromethane	6.665	111	363633	20.93	ppb	0.00	
Spiked Amount	20.000		Recovery	=	104.65%		
32) Toluene-d8	10.107	98	1728633	20.46	ppb	0.00	
Spiked Amount	20.000		Recovery	=	102.30%		
54) Bromofluorobenzene	14.489	95	1246371	19.85	ppb	0.00	
Spiked Amount	20.000		Recovery	=	99.25%		
68) 1,2-Dichlorobenzene-d4	17.188	152	838245	20.01	ppb	0.00	
Spiked Amount	20.000		Recovery	=	100.05%		
Target Compounds							
							Qvalue
11) Acetone	3.338	43	357610	36.94	ppb		84
14) Methylene chloride	3.979	84	13800	0.50	ppb		96
19) Methyl ethyl ketone	6.020	43	250812	12.33	ppb		88
37) Toluene	10.213	91	228917	1.70	ppb		97
<del>60) tert Butylbenzene</del>	<del>15.968</del>	<del>91</del>	<del>66523</del>	<del>2.01</del>	<del>ppb</del>	<del>#</del>	<del>32</del>
66) 4-Isopropyltoluene	16.514	119	53282	1.01	ppb	#	85
-----							

BKP  
12/6/23

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\05\  
 Data File : 03101031.D  
 Acq On : 6 Dec 2023 12:07 am  
 Operator : BKP  
 Sample : MDK0745-01  
 Misc :  
 ALS Vial : 31 Sample Multiplier: 1

Quant Time: Dec 06 09:41:31 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Tue Dec 05 14:48:52 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) Fluorobenzene	7.653	96	1289580	20.00	ppb	0.00
38) Chlorobenzene-d5	12.460	117	2089755	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.524	152	931127	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.162	65	451331	19.88	ppb	0.01
Spiked Amount 20.000	Range 85 - 115		Recovery =	99.40%		
24) Dibromofluoromethane	6.667	111	345695	19.65	ppb	0.01
Spiked Amount 20.000			Recovery =	98.25%		
32) Toluene-d8	10.108	98	1739373	20.33	ppb	0.00
Spiked Amount 20.000			Recovery =	101.65%		
54) Bromofluorobenzene	14.490	95	1186168	19.12	ppb	0.00
Spiked Amount 20.000			Recovery =	95.60%		
68) 1,2-Dichlorobenzene-d4	17.189	152	797961	20.11	ppb	0.00
Spiked Amount 20.000			Recovery =	100.55%		
Target Compounds						Qvalue
14) Methylene chloride	3.985	84	17519	0.62	ppb	94
-----						

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\05\  
 Data File : 03201032.D  
 Acq On : 6 Dec 2023 12:36 am  
 Operator : BKP  
 Sample : MDK0649-02  
 Misc : 100000X  
 ALS Vial : 32 Sample Multiplier: 1

Quant Time: Dec 06 09:41:54 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Tue Dec 05 14:48:52 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) Fluorobenzene	7.651	96	1309055	20.00	ppb	0.00
38) Chlorobenzene-d5	12.460	117	2232053	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.524	152	1016908	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.157	65	489961	21.26	ppb	0.00
Spiked Amount	20.000					
		Range 85 - 115	Recovery	=	106.30%	
24) Dibromofluoromethane	6.665	111	374097	20.95	ppb	0.00
Spiked Amount	20.000					
			Recovery	=	104.75%	
32) Toluene-d8	10.107	98	1786471	20.57	ppb	0.00
Spiked Amount	20.000					
			Recovery	=	102.85%	
54) Bromofluorobenzene	14.490	95	1308136	19.74	ppb	0.00
Spiked Amount	20.000					
			Recovery	=	98.70%	
68) 1,2-Dichlorobenzene-d4	17.189	152	873557	20.16	ppb	0.00
Spiked Amount	20.000					
			Recovery	=	100.80%	
Target Compounds						
						Qvalue
11) Acetone	3.366	43	24310	0.91	ppb	75
14) Methylene chloride	3.977	84	14153	0.50	ppb	84
41) Tetrachloroethene	11.072	166	1324514	42.79	ppb	90
-----						

(#) = qualifier out of range (m) = manual integration (+) = signals summed

BDL0194  
BDL0197

Starting sequence Wed Dec 06 08:19:38 2023

Instrument Name: MSD1  
Sequence File: C:\msdchem\1\sequence\120523.S  
Comment:  
Operator: BKP  
Data Path: C:\MSDCHEM\1\DATA\2023 DEC\06\  
Method Path: C:\MSDCHEM\1\METHODS\

*BKP*  
12/7/23

Line Type	Vial	DataFile	Method	Sample Name
1) Sample	1	00101001	8260PC30	RINSE
2) Sample	2	00201002	8260PC30	BLANK
3) Sample	3	00301003	8260PC30	10 PPB VOC CCV
4) Sample	4	00401004	8260PC30	RINSE
5) Sample	5	00501005	8260PC30	MDL0102-01
6) Sample	6	00601006	8260PC30	MDL0102-02
7) Sample	7	00701007	8260PC30	MDL0103-01
8) Sample	8	00801008	8260PC30	MDL0103-02
9) Sample	9	00901009	8260PC30	MDL0103-03
10) Sample	10	01001010	8260PC30	MDK0649-02
11) Sample	11	01101011	8260PC30	RINSE
12) Sample	12	01201012	8260PC30	MDL0102-01 MS
13) Sample	13	01301013	8260PC30	MDL0102-01 MSD
14) Sample	14	01401014	8260PC30	RINSE
15) Sample	15	01501015	8260PC30	MDL0104-01
16) Sample	16	01601016	8260PC30	MDL0104-02
17) Sample	17	01701017	8260PC30	MDL0104-03
18) Sample	18	01801018	8260PC30	RINSE
19) Sample	19	01901019	8260PC30	10 PPB VOC CCV 2
20) Sample	20	02001020	8260PC30	RINSE

Sequence completed Wed Dec 06 18:14:25 2023

C:\MSDCHEM\1\DATA\2023 DEC\06\2023 Dec 06 0819 Quality Log.LOG  
C:\MSDCHEM\1\DATA\2023 DEC\06\2023 Dec 06 0819 Sequence Log .LOG

QC Checklist for EPA 8260/624.1 - VOCs

Analysis Date: 12/6/23

<input checked="" type="checkbox"/>	QC Parameter	Acceptance Criteria	Frequency	Notes
<input checked="" type="checkbox"/>	BFB Tune	See below		
<input checked="" type="checkbox"/>	Initial Calibration	90% must meet <20%RSD	At least 6 points	If regression is used, weight as 1/x, with R <sup>2</sup> > 0.920
<input checked="" type="checkbox"/>	Initial Calibration	Reprocessed cal points must be within 70-130%		
<input checked="" type="checkbox"/>	Response Factor	Check against list on back		Include CCV RF report in data packet
<input checked="" type="checkbox"/>	Internal Standard	50-200% of mid-point CAL	All samples	
<input checked="" type="checkbox"/>	Surrogate Recovery	85-115%	All samples	
<input checked="" type="checkbox"/>	ICV/QCS	70-130%	Each ICAL	
<input checked="" type="checkbox"/>	Blanks	No interferences	Every 20 samples	
<input checked="" type="checkbox"/>	CCV	80% within ±20%	At beginning of run and every 12 hours.	
<input checked="" type="checkbox"/>	MS/MSD	±20%	Every 20 samples	
<input checked="" type="checkbox"/>	Cal Prep Form Present			
<input checked="" type="checkbox"/>	pH/Chlorine checks	pH<2 THM Chlorine check	All samples	
<input checked="" type="checkbox"/>	Dilutions Noted?			

Comments:

m/z	Required Intensity (relative abundance)
50	15 to 40% of m/z 95
75	30 to 60% of m/z 95
95	Base peak, 100% relative abundance
96	5 to 9% of m/z 95
173	Less than 2% of m/z 174
174	50 to 200% of m/z 95
175	5 to 9% of m/z 174
176	95% to 101% of m/z 174
177	5 to 9% of m/z 176

Analyst: Blup

Checklist Completed Date: 12/7/23

Reviewed By: or

Date: 12/19/23



RF Factor Table for EPA 8260/624.1 - VOCs

Analyte	RF	Check if <	Analyte	RF	Check if <
1,1,1-Trichloroethane	0.05		Carbon tetrachloride	0.1	
1,1,2,2-Tetrachloroethane	0.2		Chlorobenzene	0.4	
1,1,2-Trichloroethane	0.2		Chlorodibromomethane	0.2	
1,1-Dichloroethane	0.3		Chloroethane (Ethyl chloride)	0.01	
1,1-Dichloroethylene	0.06		Chloroform	0.3	
1,2,3-Trichloropropane	0.4		cis-1,2-Dichloroethylene	0.2	
1,2,4-Trichlorobenzene	0.4		cis-1,3-Dichloropropene	0.3	
1,2-Dibromo-3-chloropropane (DBCP)	0.01		Ethylbenzene	0.4	
1,2-Dibromoethane (EDB, Ethylene dibromide)	0.2		Isopropylbenzene	0.4	
1,2-Dichlorobenzene	0.6		m+p-xylene	0.2	
1,2-Dichloroethane (Ethylene dichloride)	0.07		Methyl bromide (Bromomethane)	0.01	
1,2-Dichloropropane	0.2		Methyl chloride (Chloromethane)	0.01	
1,3-Dichlorobenzene	0.5		Methyl tert-butyl ether (MTBE)	0.1	
1,4-Dichlorobenzene	0.6		o-Xylene	0.2	
2-Butanone (Methyl ethyl ketone, MEK)	0.01		Styrene	0.2	
2-Hexanone	0.01		Tetrachloroethylene (Perchloroethylene)	0.1	
4-Methyl-2-pentanone (MIBK)	0.03		Toluene	0.3	
Acetone	0.01		trans-1,2-Dichloroethylene	0.1	
Benzene	0.2		trans-1,3-Dichloropropylene	0.3	
Bromochloromethane	0.1		Trichloroethene (Trichloroethylene)	0.2	
Bromodichloromethane	0.3		Trichlorofluoromethane (Freon 11)	0.01	
Bromoform	0.1		Vinyl chloride	0.01	
Carbon disulfide	0.1				

Taken from Table 4, EPA Method 8260D



# Anatek Labs, Inc

1282 Alturas Drive  
Moscow, ID 83843

## Calibration Standard Preparation Form

**Method: EPA 8260/624.1**

Initial Calibration and CCV Standard Number: 2302582  
Initial Calibration and CCV Standard Concentration: 200 ug/mL  
Initial Calibration and CCV Standard Expiration Date: 2/28/2026

Matrix Spiking Standard Number: 2302582  
Matrix Spiking Standard Concentration: 200 ug/ml  
Matrix Spiking Standards Expiration Dates: 2/28/2026

Initial Calibration Verification (ICV) Standard Number: 2301142  
Initial Calibration Verification (ICV) Standard Concentration: 200 ug/ml  
Initial Calibration Verification (ICV) Expiration Date: 5/31/2025

Internal Standard / Surrogate Standard Number: 2204337  
Internal Standard / Surrogate Standard Concentration: 125 ug/ml  
Internal Standard / Surrogate Standard Sample Concentration: Archon adds 125 ng to 5 ml  
Expiration Date: 01/04/2024

### Initial Calibration Dilution Template (minimum of 5 calibration points)

Desired Concentration (ppb)	Stock Concentration (ppm)	uL Standard Added	Final Volume (mL)
30	200	7.5	50
20	200	5	50
15	200	7.5	100
10	200	5.0	100
5	200	2.5	100
2	200	1.0	100
0.5	10 ppb Cal std	5 ml	100
<b>ICV 10</b>	<b>200</b>	<b>5</b>	<b>100</b>

Add 2 drops of 1:1 HCl per 50mL to Standards, CCV, ICV, and Reagent Blanks.

### Calibration Prep:

ICAL and ICV Prep Date: **12/4/2023**

### Solution Prepared:

<input checked="" type="checkbox"/>	CCV	pH paper reagent # 2002327
<input checked="" type="checkbox"/>	MS/MSD	Free Chlorine Test strip reagent# 2301362
<input checked="" type="checkbox"/>	pH check	
<input checked="" type="checkbox"/>	Chlorine check (THM)	

Analyst: BUP

Date of Preparation: 12/6/23

# PREPARATION BENCH SHEET

BDL0197

**Matrix: Liquid**

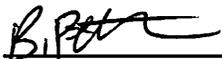
**Prepared using: VOC - VOC**

**Surrogate used: 2302876**

Lab Number	Analysis	Prepared - By	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Client	Extraction Comments
BDL0197-BLK1	QC	12/06/23 08:10-BKP	50	50				10		
BDL0197-BS1	QC	12/06/23 08:10-BKP	50	50	2302582		2.5	10		
MDL0104-01	VOC 8260	12/06/23 09:10-BKP	5	15				3	Freeport McMoran - Chino Mines	
MDL0104-02	VOC 8260	12/06/23 09:10-BKP	5	15				3	Freeport McMoran - Chino Mines	
MDL0104-03	VOC 8260	12/06/23 09:10-BKP	5	15				3	Freeport McMoran - Chino Mines	

Support Info: P-Syringe(s) BAL-09

Reagent	Description	LotNum
2302771	Methanol P&T	62199
2303166	HCl 1:1	-

  
Prepared By:

12/7/23  
Date

12/6/23  
Analytical Run Date:

# PREPARATION BENCH SHEET

BDL0196

**Matrix: Water**

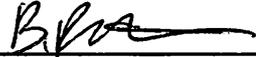
**Prepared using: VOC - VOC**

**Surrogate used: 2302876**

Lab Number	Analysis	Prepared - By	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Client	Extraction Comments
BDL0196-BLK1	QC	12/06/23 09:04-BKP	50	50				10		
BDL0196-BS1	QC	12/06/23 09:33-BKP	50	50	2302582		2.5	10		
BDL0196-MS1	QC	12/06/23 13:57-BKP	50	50	2302582	MDL0102-01	2.5	10		
BDL0196-MSD1	QC	12/06/23 14:26-BKP	50	50	2302582	MDL0102-01	2.5	10		
MDL0102-01	VOC 8260	12/06/23 10:32-BKP	50	50				10	PBS Engineering - Portland	
MDL0102-01	VOC Trip Blank 8260	12/06/23 09:09-BKP	50	50				10	PBS Engineering - Portland	Added for BatchQC in: BDL0196
MDL0102-02	VOC 8260	12/06/23 11:01-BKP	50	50				10	PBS Engineering - Portland	
MDL0103-01	VOC 8260	12/06/23 11:31-BKP	50	50				10	PBS Engineering - Portland	
MDL0103-02	VOC 8260	12/06/23 12:00-BKP	50	50				10	PBS Engineering - Portland	
MDL0103-03	VOC Trip Blank 8260	12/06/23 12:29-BKP	50	50				10	PBS Engineering - Portland	

Support Info: P-Syringe(s) BAL-09

Reagent	Description	LotNum
2302771	Methanol P&T	62199
2303166	HCl 1:1	-

Prepared By: 

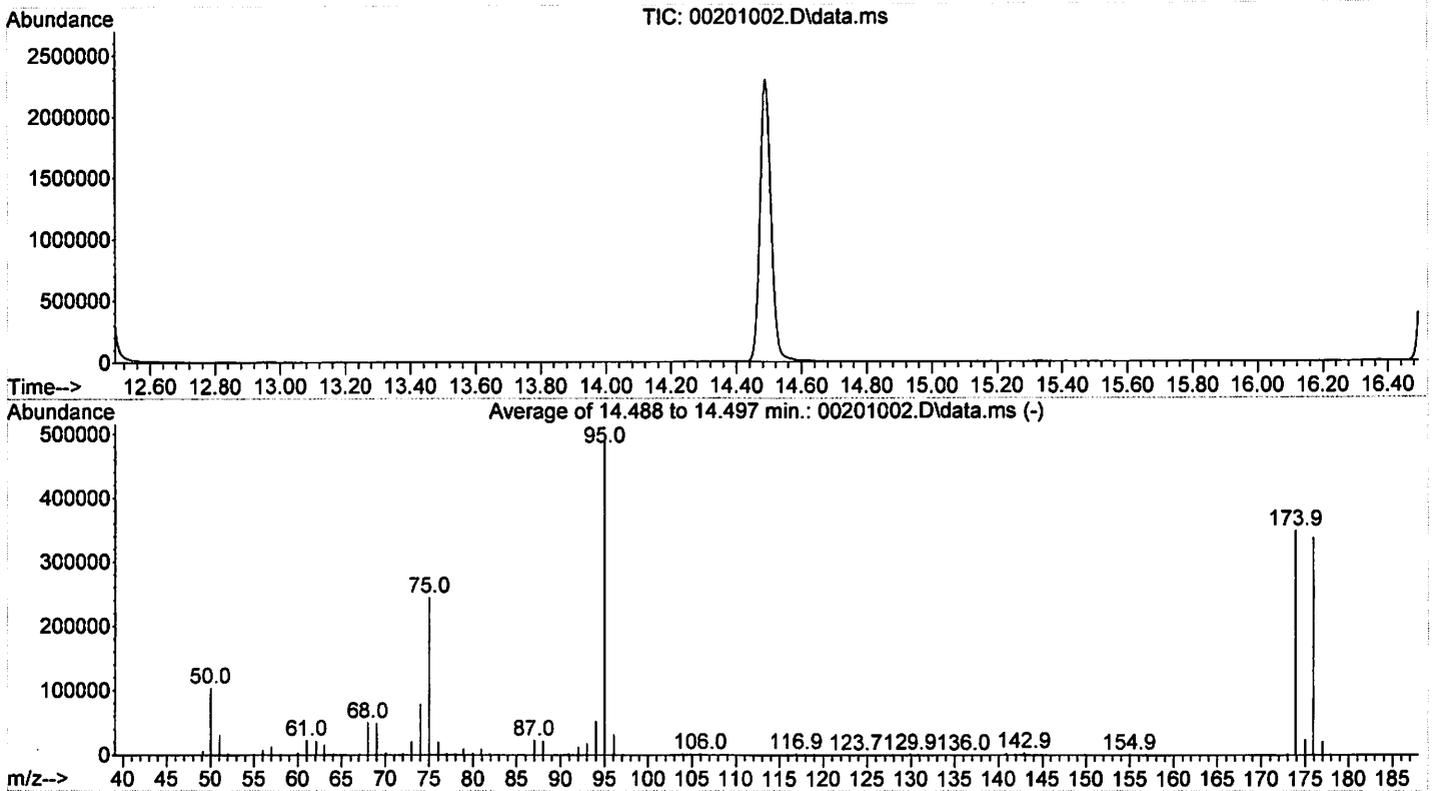
Date: 12/7/23

Analytical Run Date: 12/6/23

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\06\  
 Data File : 00201002.D  
 Acq On : 6 Dec 2023 9:04 am  
 Operator : BKP  
 Sample : BLANK  
 Misc :  
 ALS Vial : 2 Sample Multiplier: 1

Integration File: rteint.p

Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 Last Update : Mon Dec 04 14:33:00 2023



AutoFind: Scans 2414, 2415, 2416; Background Corrected with Scan 2398

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result
50	95	15	40	21.1	103789	PASS
75	95	30	60	49.7	243989	PASS
95	95	100	100	100.0	490944	PASS
96	95	5	9	6.4	31515	PASS
173	174	0.00	2	0.7	2391	PASS
174	95	50	200	70.7	347328	PASS
175	174	5	9	6.7	23440	PASS
176	174	95	105	96.7	335829	PASS
177	176	5	9	6.3	21240	PASS

Response Factor Report MSD1

Method Path : T:\Data2\Voc\HP5975\2023 METHODS\  
 Method File : DEC04.M  
 Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 Last Update : Mon Dec 04 14:33:00 2023  
 Response Via : Initial Calibration

Calibration Files

0.5 =00301003.D 5 =00501005.D 10 =00601006.D 30 =00901009.D 20 =00801008.D 2 =00.

Compound	0.5	5	10	30	20	2	15	Avg	%RSD
-----ISTD-----									
1) I Fluorobenzene									
2) S 1,2-Dichloroet...	0.367	0.353	0.349	0.339	0.343	0.365	0.348	0.352	2.93
3) Dichlorodifluo...	0.136	0.167	0.167	0.135	0.157	0.123	0.173	0.151	12.88
4) Chloromethane	0.394	0.356	0.356	0.314	0.349	0.333	0.360	0.352	7.05
5) Vinyl chloride	0.418	0.465	0.466	0.392	0.448	0.391	0.479	0.437	8.36
6) Bromomethane	0.198	0.173	0.175	0.114	0.135	0.145	0.165	0.158	17.89
7) Chloroethane	0.280	0.273	0.282	0.213	0.245	0.236	0.277	0.258	10.42
8) Trichlorofluor...	0.484	0.579	0.581	0.473	0.551	0.449	0.601	0.531	11.53
9) Diethyl ether	0.540	0.554	0.571	0.491	0.546	0.519	0.568	0.541	5.24
10) 1,1-Dichloroet...	0.698	0.760	0.768	0.659	0.749	0.641	0.784	0.723	7.81
11) Acetone		0.199	0.180	0.143	0.156	0.244	0.178	0.183	19.39
12) Methyl iodide	0.315	0.318	0.350	0.297	0.332	0.266	0.351	0.318	9.50
13) Carbon disulfide	1.294	1.346	1.366	1.124	1.275	1.151	1.367	1.275	7.86
14) Methylene chlo...	0.522	0.433	0.447	0.375	0.419	0.421	0.441	0.437	10.13
15) MTBE (2-methox...	2.095	1.869	1.900	1.646	1.837	1.800	1.911	1.866	7.23
16) trans-1,2-Dich...	0.806	0.845	0.856	0.739	0.826	0.757	0.867	0.814	6.06
17) Acrylonitrile		0.160	0.205	0.197	0.214	0.142	0.222	0.190	16.80
18) 1,1-Dichloroet...	1.046	1.069	1.092	0.941	1.048	1.002	1.096	1.042	5.27
19) Methyl ethyl k...	0.254	0.265	0.307	0.315	0.339	0.305	0.351	0.305	11.72
20) 2,2-Dichloropr...		0.754	0.764	0.665	0.749	0.664	0.787	0.730	7.23
21) cis-1,2-Dichlo...	0.493	0.510	0.530	0.466	0.513	0.479	0.541	0.505	5.36
22) Bromochloromet...	0.276	0.281	0.292	0.240	0.274	0.274	0.294	0.276	6.50
23) Chloroform	0.891	0.886	0.914	0.777	0.869	0.877	0.909	0.875	5.26
24) S Dibromofluorom...	0.273	0.275	0.272	0.271	0.275	0.270	0.273	0.273	0.73
25) 1,1,1-Trichlor...	0.679	0.727	0.734	0.624	0.702	0.641	0.744	0.693	6.79
26) 1,1-Dichloropr...	0.712	0.808	0.817	0.692	0.789	0.682	0.835	0.762	8.48
27) Carbon tetrach...	0.432	0.536	0.548	0.472	0.537	0.435	0.569	0.504	11.23
28) Benzene	2.329	2.441	2.486	2.106	2.365	2.319	2.477	2.360	5.56
29) 1,2-Dichloroet...	0.764	0.833	0.837	0.708	0.792	0.816	0.828	0.797	5.92
30) Trichloroethene	0.477	0.486	0.491	0.416	0.467	0.451	0.493	0.469	5.84
31) 1,2-Dichloropr...	0.667	0.674	0.680	0.582	0.654	0.660	0.684	0.657	5.27
32) S Toluene-d8	1.303	1.332	1.334	1.321	1.332	1.325	1.339	1.327	0.91
33) Dibromomethane	0.258	0.265	0.270	0.236	0.262	0.259	0.274	0.261	4.71
34) Bromodichlorom...	0.664	0.672	0.682	0.583	0.652	0.631	0.681	0.652	5.44
35) cis-1,3-Dichlo...	0.780	0.899	0.943	0.836	0.935	0.845	0.964	0.886	7.63
36) Methyl isobuty...		0.756	0.826	0.748	0.828	0.678	0.877	0.785	9.11
37) Toluene	2.014	2.175	2.202	1.903	2.132	2.113	2.223	2.109	5.41
-----ISTD-----									
38) I Chlorobenzene-d5									
39) trans-1,3-Dich...	0.436	0.503	0.536	0.492	0.543	0.460	0.550	0.503	8.61
40) 1,1,2-Trichlor...	0.304	0.304	0.311	0.268	0.299	0.306	0.310	0.300	4.96
41) Tetrachloroethene	0.320	0.285	0.282	0.237	0.267	0.269	0.281	0.277	8.94
42) 2-Hexanone		0.290	0.338	0.312	0.339	0.246	0.363	0.315	13.33
43) 1,3-Dichloropr...	0.596	0.607	0.620	0.536	0.599	0.600	0.620	0.597	4.75
44) Dibromochlorom...	0.251	0.261	0.268	0.235	0.262	0.251	0.272	0.257	4.89
45) 1,2-Dibromoethane	0.262	0.274	0.286	0.250	0.277	0.268	0.289	0.272	4.99
46) Chlorobenzene	0.688	0.721	0.730	0.631	0.698	0.719	0.731	0.703	5.05
47) 1,1,1,2-Tetrac...	0.224	0.231	0.242	0.211	0.231	0.232	0.243	0.231	4.74
48) Ethylbenzene	1.122	1.260	1.304	1.156	1.279	1.189	1.329	1.234	6.38
49) m+p-Xylene	0.756	0.920	0.962	0.843	0.938	0.852	0.975	0.892	8.83
50) o-Xylene	0.737	0.874	0.919	0.823	0.915	0.814	0.944	0.861	8.54
51) Styrene	0.488	0.632	0.703	0.607	0.696	0.571	0.701	0.628	12.84
52) Bromoform	0.119	0.127	0.130	0.119	0.133	0.124	0.134	0.127	4.90
53) Isopropylbenzene	0.663	0.857	0.914	0.816	0.909	0.774	0.944	0.840	11.67

54)	S	Bromofluoroben...	0.589	0.596	0.598	0.591	0.596	0.587	0.601	0.594	0.90
55)		Bromobenzene	0.195	0.204	0.207	0.183	0.202	0.206	0.208	0.201	4.57
56)		n-Propylbenzene	0.847	1.040	1.100	0.957	1.075	0.934	1.119	1.010	9.95
57)		1,3,5-Trimethy...	0.455	0.586	0.625	0.541	0.608	0.516	0.630	0.566	11.40
58)		2-Chlorotoluene	0.514	0.613	0.629	0.551	0.614	0.575	0.638	0.591	7.69
59)		4-Chlorotoluene	0.585	0.688	0.713	0.623	0.699	0.635	0.721	0.666	7.82
60)		tert-Butylbenzene	0.261	0.324	0.339	0.298	0.337	0.285	0.349	0.313	10.39
61)		1,1,2,2-Tetrac...	0.311	0.316	0.320	0.275	0.312	0.308	0.327	0.310	5.33
62)		trans-1,4-Dich...		0.098	0.105	0.101	0.110	0.088	0.114	0.103	9.25
63)		1,2,3-Trichlor...	0.088	0.092	0.094	0.080	0.089	0.089	0.094	0.090#	5.40
64)		1,2,4-Trimethy...	0.425	0.553	0.597	0.532	0.596	0.492	0.611	0.544	12.36
65)		sec-Butylbenzene	0.499	0.659	0.704	0.615	0.698	0.563	0.721	0.637	12.98
66)		4-Isopropyltol...	0.430	0.513	0.542	0.473	0.535	0.456	0.553	0.500	9.47
67)	I	1,4-Dichlorobenzen...	-----ISTD-----								
68)	S	1,2-Dichlorobe...	0.872	0.846	0.848	0.845	0.847	0.853	0.855	0.852	1.11
69)		1,3-Dichlorobe...	0.564	0.619	0.629	0.559	0.619	0.618	0.642	0.607	5.30
70)		1,4-Dichlorobe...	0.640	0.642	0.656	0.569	0.641	0.649	0.663	0.637	4.90
71)		1,2-Dichlorobe...	0.588	0.558	0.572	0.497	0.558	0.577	0.577	0.561	5.37
72)		n-butylbenzene	0.793	0.942	1.013	0.872	0.985	0.854	1.022	0.926	9.47
73)		1,2-Dibromo-3-...	0.059	0.066	0.067	0.064	0.067	0.062	0.070	0.065#	5.80
74)		1,2,4-Trichlor...	0.195	0.228	0.246	0.236	0.246	0.230	0.251	0.233	8.14
75)		Hexachlorobuta...	0.101	0.099	0.103	0.083	0.096	0.091	0.099	0.096#	7.00
76)		Naphthalene	0.542	0.627	0.710	0.785	0.772	0.577	0.786	0.686	15.08
77)		1,2,3-Trichlor...	0.197	0.206	0.220	0.209	0.224	0.202	0.229	0.212	5.65

(#) = Out of Range

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\06\  
 Data File : 00201002.D  
 Acq On : 6 Dec 2023 9:04 am  
 Operator : BKP  
 Sample : BLANK  
 Misc :  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 06 10:53:58 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Tue Dec 05 14:48:52 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) Fluorobenzene	7.653	96	1250693	20.00	ppb	0.00
38) Chlorobenzene-d5	12.460	117	2128530	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.524	152	942534	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.161	65	468293	21.27	ppb	0.01
Spiked Amount	20.000	Range 85 - 115	Recovery	=	106.35%	
24) Dibromofluoromethane	6.667	111	353424	20.71	ppb	0.01
Spiked Amount	20.000		Recovery	=	103.55%	
32) Toluene-d8	10.108	98	1716061	20.68	ppb	0.00
Spiked Amount	20.000		Recovery	=	103.40%	
54) Bromofluorobenzene	14.491	95	1230066	19.46	ppb	0.00
Spiked Amount	20.000		Recovery	=	97.30%	
68) 1,2-Dichlorobenzene-d4	17.189	152	830153	20.67	ppb	0.00
Spiked Amount	20.000		Recovery	=	103.35%	
Target Compounds						Qvalue
-----						

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\06\  
 Data File : 00301003.D  
 Acq On : 6 Dec 2023 9:33 am  
 Operator : BKP  
 Sample : 10 PPB VOC CCV  
 Misc :  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 07 12:05:34 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Wed Dec 06 15:57:37 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
-----							
Internal Standards							
1) Fluorobenzene	7.651	96	1310576	20.00	ppb	0.00	
38) Chlorobenzene-d5	12.459	117	2198712	20.00	ppb	0.00	
67) 1,4-Dichlorobenzene-d4	16.523	152	1047348	20.00	ppb	0.00	
System Monitoring Compounds							
2) 1,2-Dichloroethane-d4	7.154	65	469123	20.33	ppb	0.00	
Spiked Amount	20.000	Range 85 - 115	Recovery	=	101.65%		
24) Dibromofluoromethane	6.662	111	375087	20.98	ppb	0.00	
Spiked Amount	20.000		Recovery	=	104.90%		
32) Toluene-d8	10.105	98	1831735	21.07	ppb	0.00	
Spiked Amount	20.000		Recovery	=	105.35%		
54) Bromofluorobenzene	14.489	95	1332076	20.40	ppb	0.00	
Spiked Amount	20.000		Recovery	=	102.00%		
68) 1,2-Dichlorobenzene-d4	17.188	152	879702	19.71	ppb	0.00	
Spiked Amount	20.000		Recovery	=	98.55%		
Target Compounds							
							Qvalue
3) Dichlorodifluoromethane	1.050	85	107360	9.66	ppb		100
4) Chloromethane	1.258	50	242200	10.89	ppb		99
5) Vinyl chloride	1.407	62	330345	11.54	ppb		100
6) Bromomethane	1.876	96	137646	13.18	ppb		98
7) Chloroethane	2.029	64	212277	11.94	ppb		100
8) Trichlorofluoromethane	2.392	101	414107	11.90	ppb		100
9) Diethyl ether	2.861	59	388771	10.96	ppb		90
10) 1,1-Dichloroethene	3.171	61	530006	11.19	ppb		88
11) Acetone	3.359	43	136057m	11.65	ppb		
12) Methyl iodide	3.401	142	251521	11.42	ppb		91
13) Carbon disulfide	3.470	76	979791	11.73	ppb		100
14) Methylene chloride	3.973	84	324984	11.35	ppb		94
15) MTBE (2-methoxy-2-meth...)	4.400	73	1315896	10.76	ppb		91
16) trans-1,2-Dichloroethene	4.379	61	599326	11.24	ppb	#	76
17) Acrylonitrile	4.459	53	152390	12.24	ppb		86
18) 1,1-Dichloroethane	5.029	63	763506	11.18	ppb		95
19) Methyl ethyl ketone	6.023	43	244554	11.70	ppb		87
20) 2,2-Dichloropropane	5.892	77	531273	11.10	ppb		96
21) cis-1,2-Dichloroethene	5.924	96	368804	11.15	ppb		99
22) Bromochloromethane	6.279	130	208856	11.56	ppb		98
23) Chloroform	6.416	83	642545	11.21	ppb		95
25) 1,1,1-Trichloroethane	6.643	97	512360	11.28	ppb		79
26) 1,1-Dichloropropene	6.898	75	570933	11.43	ppb		75
27) Carbon tetrachloride	6.880	117	385686	11.68	ppb		96
28) Benzene	7.209	78	1732469	11.20	ppb		99
29) 1,2-Dichloroethane	7.269	62	587811	11.26	ppb		96
30) Trichloroethene	8.204	130	349704	11.39	ppb	#	83
31) 1,2-Dichloropropane	8.554	63	475113	11.03	ppb		97
33) Dibromomethane	8.747	174	193230	11.32	ppb	#	39
34) Bromodichloromethane	9.001	83	482493	11.29	ppb		92
35) cis-1,3-Dichloropropene	9.711	75	659557	10.58	ppb		77
36) Methyl isobutyl ketone	9.995	43	602827	11.18	ppb		90

37)	Toluene	10.210	91	1548219	11.20	ppb	99
39)	trans-1,3-Dichloropropene	10.621	75	571963	9.77	ppb	79
40)	1,1,2-Trichloroethane	10.898	97	342413	10.38	ppb #	85
41)	Tetrachloroethene	11.069	166	393235m	12.59	ppb	
42)	2-Hexanone	11.361	43	360163m	9.85	ppb	
43)	1,3-Dichloropropane	11.163	76	677733	10.33	ppb	100
44)	Dibromochloromethane	11.519	129	291465	10.30	ppb	98
45)	1,2-Dibromoethane	11.687	107	311488	10.40	ppb	97
46)	Chlorobenzene	12.506	112	799197	10.35	ppb #	78
47)	1,1,1,2-Tetrachloroethane	12.659	131	262408	10.35	ppb	98
48)	Ethylbenzene	12.710	91	1404730	10.35	ppb	91
49)	m+p-Xylene	12.913	91	2074750	21.15	ppb	89
50)	o-Xylene	13.584	91	990478	10.47	ppb	88
51)	Styrene	13.619	104	749637	9.77	ppb	80
52)	Bromoform	13.918	173	142715	10.20	ppb	96
53)	Isopropylbenzene	14.234	105	983844	10.66	ppb	97
55)	Bromobenzene	14.726	156	225093	10.20	ppb #	43
56)	n-Propylbenzene	14.954	91	1182616	10.65	ppb #	87
57)	1,3,5-Trimethylbenzene	15.282	105	674627	10.84	ppb	95
58)	2-Chlorotoluene	15.077	91	684955	10.55	ppb #	77
59)	4-Chlorotoluene	15.279	91	771463	10.53	ppb #	80
60)	tert-Butylbenzene	15.844	91	363840	10.56	ppb #	72
61)	1,1,2,2-Tetrachloroethane	14.802	83	349961	10.28	ppb	95
62)	trans-1,4-Dichloro-2-b...	14.917	53	110995	9.44	ppb	90
63)	1,2,3-Trichloropropane	14.853	110	102187	10.37	ppb	92
64)	1,2,4-Trimethylbenzene	15.935	105	646069	10.81	ppb	92
65)	sec-Butylbenzene	16.236	105	759260	10.84	ppb #	89
66)	4-Isopropyltoluene	16.515	119	588323	10.69	ppb #	91
69)	1,3-Dichlorobenzene	16.400	146	321734	10.12	ppb	93
70)	1,4-Dichlorobenzene	16.564	146	332898	9.98	ppb	95
71)	1,2-Dichlorobenzene	17.221	146	290998	9.91	ppb	93
72)	n-butylbenzene	17.250	91	512104	10.56	ppb #	88
73)	1,2-Dibromo-3-chloropr...	18.653	157	35486	9.91	ppb	99
74)	1,2,4-Trichlorobenzene	20.139	180	115819	9.49	ppb	94
75)	Hexachlorobutadiene	20.471	225	51685	10.27	ppb	93
76)	Naphthalene	20.577	128	348897	8.87	ppb	87
77)	1,2,3-Trichlorobenzene	21.019	180	109161	9.82	ppb	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\06\  
 Data File : 00501005.D  
 Acq On : 6 Dec 2023 10:32 am  
 Operator : BKP  
 Sample : MDL0102-01  
 Misc :  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 07 09:04:20 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Dec 04 14:33:00 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev (Min)
<b>Internal Standards</b>						
1) Fluorobenzene	7.651	96	1288660	20.00	ppb	0.00
38) Chlorobenzene-d5	12.459	117	2227301	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.523	152	1004977	20.00	ppb	0.00
<b>System Monitoring Compounds</b>						
2) 1,2-Dichloroethane-d4	7.159	65	482679	21.27	ppb	0.01
Spiked Amount	20.000					
	Range	85 - 115	Recovery	=	106.35%	
24) Dibromofluoromethane	6.663	111	370866	21.10	ppb	0.00
Spiked Amount	20.000					
			Recovery	=	105.50%	
32) Toluene-d8	10.106	98	1778707	20.81	ppb	0.00
Spiked Amount	20.000					
			Recovery	=	104.05%	
54) Bromofluorobenzene	14.489	95	1305485	19.74	ppb	0.00
Spiked Amount	20.000					
			Recovery	=	98.70%	
68) 1,2-Dichlorobenzene-d4	17.188	152	872450	20.37	ppb	0.00
Spiked Amount	20.000					
			Recovery	=	101.85%	
<b>Target Compounds</b>						
11) Acetone	3.394	43	5644	Below Cal		Qvalue 81

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\06\  
 Data File : 00601006.D  
 Acq On : 6 Dec 2023 11:01 am  
 Operator : BKP  
 Sample : MDL0102-02  
 Misc :  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Dec 07 09:04:37 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Dec 04 14:33:00 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) Fluorobenzene	7.653	96	1264530	20.00	ppb	0.00
38) Chlorobenzene-d5	12.459	117	2209833	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.523	152	999676	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.161	65	479512	21.54	ppb	0.01
Spiked Amount	20.000	Range 85 - 115	Recovery	=	107.70%	
24) Dibromofluoromethane	6.668	111	380910	22.08	ppb	0.01
Spiked Amount	20.000		Recovery	=	110.40%	
32) Toluene-d8	10.108	98	1754925	20.92	ppb	0.00
Spiked Amount	20.000		Recovery	=	104.60%	
54) Bromofluorobenzene	14.489	95	1302421	19.85	ppb	0.00
Spiked Amount	20.000		Recovery	=	99.25%	
68) 1,2-Dichlorobenzene-d4	17.188	152	874474	20.53	ppb	0.00
Spiked Amount	20.000		Recovery	=	102.65%	
Target Compounds						
						Qvalue
3) Dichlorodifluoromethane	1.060	85	113898	10.71	ppb	97
10) 1,1-Dichloroethene	3.185	61	98785	2.16	ppb	90
18) 1,1-Dichloroethane	5.037	63	248584	3.77	ppb	97
25) 1,1,1-Trichloroethane	6.646	97	67446	1.54	ppb	79
61) 1,1,2,2-Tetrachloroethane	14.804	83	20653	0.60	ppb	80
-----						

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\06\  
 Data File : 00701007.D  
 Acq On : 6 Dec 2023 11:31 am  
 Operator : BKP  
 Sample : MDL0103-01  
 Misc :  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Dec 07 09:05:08 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Dec 04 14:33:00 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) Fluorobenzene	7.651	96	1258598	20.00	ppb	0.00
38) Chlorobenzene-d5	12.459	117	2203521	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.523	152	990439	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.158	65	476299	21.49	ppb	0.00
Spiked Amount 20.000	Range 85 - 115		Recovery	= 107.45%		
24) Dibromofluoromethane	6.663	111	375940	21.90	ppb	0.00
Spiked Amount 20.000			Recovery	= 109.50%		
32) Toluene-d8	10.106	98	1736254	20.80	ppb	0.00
Spiked Amount 20.000			Recovery	= 104.00%		
54) Bromofluorobenzene	14.489	95	1291417	19.74	ppb	0.00
Spiked Amount 20.000			Recovery	= 98.70%		
68) 1,2-Dichlorobenzene-d4	17.188	152	862261	20.43	ppb	0.00
Spiked Amount 20.000			Recovery	= 102.15%		
Target Compounds						Qvalue
3) Dichlorodifluoromethane	1.053	85	14773	1.49	ppb	93
11) Acetone	3.394	43	10999	Below	Cal	60
-----						

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\06\  
 Data File : 00801008.D  
 Acq On : 6 Dec 2023 12:00 pm  
 Operator : BKP  
 Sample : MDL0103-02  
 Misc :  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Dec 07 09:05:27 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Dec 04 14:33:00 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) Fluorobenzene	7.649	96	1231675	20.00	ppb	0.00
38) Chlorobenzene-d5	12.458	117	2171930	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.523	152	973398	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.156	65	475251	21.91	ppb	0.00
Spiked Amount	20.000	Range 85 - 115	Recovery	=	109.55%	
24) Dibromofluoromethane	6.660	111	366518	21.81	ppb	0.00
Spiked Amount	20.000		Recovery	=	109.05%	
32) Toluene-d8	10.105	98	1715601	21.00	ppb	0.00
Spiked Amount	20.000		Recovery	=	105.00%	
54) Bromofluorobenzene	14.489	95	1265204	19.62	ppb	0.00
Spiked Amount	20.000		Recovery	=	98.10%	
68) 1,2-Dichlorobenzene-d4	17.188	152	859096	20.71	ppb	0.00
Spiked Amount	20.000		Recovery	=	103.55%	
Target Compounds						
11) Acetone	3.352	43	37498	2.54	ppb	Qvalue 76
-----						

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\06\  
 Data File : 00901009.D  
 Acq On : 6 Dec 2023 12:29 pm  
 Operator : BKP  
 Sample : MDL0103-03  
 Misc :  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Dec 07 09:05:44 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Dec 04 14:33:00 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) Fluorobenzene	7.652	96	1230079	20.00	ppb	0.00
38) Chlorobenzene-d5	12.459	117	2168548	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.523	152	978282	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.158	65	467602	21.59	ppb	0.00
Spiked Amount	20.000	Range 85 - 115	Recovery	=	107.95%	
24) Dibromofluoromethane	6.665	111	366218	21.82	ppb	0.00
Spiked Amount	20.000		Recovery	=	109.10%	
32) Toluene-d8	10.107	98	1702164	20.86	ppb	0.00
Spiked Amount	20.000		Recovery	=	104.30%	
54) Bromofluorobenzene	14.489	95	1284785	19.95	ppb	0.00
Spiked Amount	20.000		Recovery	=	99.75%	
68) 1,2-Dichlorobenzene-d4	17.188	152	857010	20.56	ppb	0.00
Spiked Amount	20.000		Recovery	=	102.80%	
Target Compounds						
11) Acetone	3.394	43	13366	Below Cal		Qvalue 90
-----						

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\06\  
 Data File : 01001010.D  
 Acq On : 6 Dec 2023 12:58 pm  
 Operator : BKP  
 Sample : MDK0649-02  
 Misc : 500000X  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Dec 07 09:06:14 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Dec 04 14:33:00 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	7.649	96	1240781	20.00	ppb	0.00
38) Chlorobenzene-d5	12.459	117	2225304	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.523	152	992825	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.157	65	474546	21.72	ppb	0.00
Spiked Amount 20.000	Range 85 - 115		Recovery	= 108.60%		
24) Dibromofluoromethane	6.661	111	369474	21.83	ppb	0.00
Spiked Amount 20.000			Recovery	= 109.15%		
32) Toluene-d8	10.106	98	1743469	21.18	ppb	0.00
Spiked Amount 20.000			Recovery	= 105.90%		
54) Bromofluorobenzene	14.489	95	1300464	19.68	ppb	0.00
Spiked Amount 20.000			Recovery	= 98.40%		
68) 1,2-Dichlorobenzene-d4	17.187	152	867918	20.52	ppb	0.00
Spiked Amount 20.000			Recovery	= 102.60%		
Target Compounds						Qvalue
11) Acetone	3.373	43	18897	0.45	ppb	82
41) Tetrachloroethene	11.072	166	200632	6.50	ppb	87

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\06\  
 Data File : 01201012.D  
 Acq On : 6 Dec 2023 1:57 pm  
 Operator : BKP  
 Sample : MDL0102-01 MS  
 Misc :  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Dec 07 12:13:21 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Dec 04 14:33:00 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
-----							
Internal Standards							
1) Fluorobenzene	7.653	96	1113509	20.00	ppb	0.00	
38) Chlorobenzene-d5	12.458	117	1923257	20.00	ppb	0.00	
67) 1,4-Dichlorobenzene-d4	16.522	152	909833	20.00	ppb	0.00	
System Monitoring Compounds							
2) 1,2-Dichloroethane-d4	7.157	65	401359	20.47	ppb	0.00	
Spiked Amount 20.000	Range 85 - 115		Recovery	= 102.35%			
24) Dibromofluoromethane	6.666	111	326257	21.48	ppb	0.00	
Spiked Amount 20.000			Recovery	= 107.40%			
32) Toluene-d8	10.106	98	1574331	21.31	ppb	0.00	
Spiked Amount 20.000			Recovery	= 106.55%			
54) Bromofluorobenzene	14.488	95	1165861	20.42	ppb	0.00	
Spiked Amount 20.000			Recovery	= 102.10%			
68) 1,2-Dichlorobenzene-d4	17.187	152	757125	19.53	ppb	0.00	
Spiked Amount 20.000			Recovery	= 97.65%			
Target Compounds							
							Qvalue
3) Dichlorodifluoromethane	1.057	85	98110	10.45	ppb		97
4) Chloromethane	1.267	50	216108	11.44	ppb		99
5) Vinyl chloride	1.420	62	298210	12.26	ppb		98
6) Bromomethane	1.889	96	121966	13.91	ppb		96
7) Chloroethane	2.038	64	188090m	12.53	ppb		
8) Trichlorofluoromethane	2.401	101	378783	12.81	ppb		95
9) Diethyl ether	2.874	59	343416	11.39	ppb		90
10) 1,1-Dichloroethene	3.185	61	481888	11.98	ppb		89
11) Acetone	3.380	43	106895m	11.55	ppb		
12) Methyl iodide	3.408	142	220863	11.82	ppb		93
13) Carbon disulfide	3.484	76	892304	12.57	ppb		100
14) Methylene chloride	3.982	84	293984	12.09	ppb		95
15) MTBE (2-methoxy-2-meth...	4.408	73	1156052	11.13	ppb		92
16) trans-1,2-Dichloroethene	4.387	61	534829	11.80	ppb	#	77
17) Acrylonitrile	4.459	53	115870	10.95	ppb		95
18) 1,1-Dichloroethane	5.035	63	680422	11.73	ppb		96
19) Methyl ethyl ketone	6.030	43	199375	11.23	ppb		87
20) 2,2-Dichloropropane	5.897	77	483492	11.89	ppb		99
21) cis-1,2-Dichloroethene	5.928	96	327758	11.67	ppb		99
22) Bromochloromethane	6.284	130	187931	12.24	ppb		96
23) Chloroform	6.421	83	581626	11.94	ppb		95
25) 1,1,1-Trichloroethane	6.647	97	463159	12.00	ppb		81
26) 1,1-Dichloropropene	6.901	75	514158	12.12	ppb		76
27) Carbon tetrachloride	6.884	117	352401	12.56	ppb		94
28) Benzene	7.212	78	1548733	11.79	ppb		99
29) 1,2-Dichloroethane	7.273	62	523222	11.79	ppb		97
30) Trichloroethene	8.205	130	312705	11.98	ppb	#	84
31) 1,2-Dichloropropane	8.556	63	422503	11.55	ppb		96
33) Dibromomethane	8.749	174	173042	11.93	ppb	#	34
34) Bromodichloromethane	9.003	83	430399	11.85	ppb		92
35) cis-1,3-Dichloropropene	9.713	75	575436	10.88	ppb		76
36) Methyl isobutyl ketone	9.997	43	510894	11.15	ppb		89

37)	Toluene	10.211	91	1388826	11.83	ppb	99
39)	trans-1,3-Dichloropropene	10.622	75	501012	9.78	ppb	81
40)	1,1,2-Trichloroethane	10.899	97	304084	10.53	ppb	86
41)	Tetrachloroethene	11.072	166	279680	10.49	ppb #	90
42)	2-Hexanone	11.370	43	320245	10.02	ppb	86
43)	1,3-Dichloropropane	11.164	76	603392	10.51	ppb	100
44)	Dibromochloromethane	11.519	129	252042	10.19	ppb	96
45)	1,2-Dibromoethane	11.688	107	279115	10.66	ppb	98
46)	Chlorobenzene	12.505	112	711824	10.54	ppb #	77
47)	1,1,1,2-Tetrachloroethane	12.659	131	231781	10.46	ppb	95
48)	Ethylbenzene	12.709	91	1251711	10.55	ppb	92
49)	m+p-Xylene	12.913	91	1851701	21.58	ppb	86
50)	o-Xylene	13.583	91	868368	10.49	ppb	89
51)	Styrene	13.619	104	672808	10.03	ppb	79
52)	Bromoform	13.918	173	112384	9.18	ppb	99
53)	Isopropylbenzene	14.233	105	867299	10.74	ppb	95
55)	Bromobenzene	14.724	156	194462	10.07	ppb #	40
56)	n-Propylbenzene	14.954	91	1048873	10.80	ppb #	85
57)	1,3,5-Trimethylbenzene	15.280	105	591882	10.88	ppb	95
58)	2-Chlorotoluene	15.076	91	599857	10.56	ppb #	81
59)	4-Chlorotoluene	15.278	91	682533	10.65	ppb #	81
60)	tert-Butylbenzene	15.843	91	316681	10.51	ppb #	76
61)	1,1,2,2-Tetrachloroethane	14.802	83	312924	10.51	ppb	92
62)	trans-1,4-Dichloro-2-b...	14.916	53	89957	8.74	ppb	94
63)	1,2,3-Trichloropropane	14.852	110	90487	10.50	ppb	99
64)	1,2,4-Trimethylbenzene	15.934	105	568652	10.88	ppb	92
65)	sec-Butylbenzene	16.235	105	664654	10.85	ppb #	89
66)	4-Isopropyltoluene	16.514	119	513410	10.67	ppb #	93
69)	1,3-Dichlorobenzene	16.399	146	281496	10.19	ppb	95
70)	1,4-Dichlorobenzene	16.563	146	293645	10.13	ppb	96
71)	1,2-Dichlorobenzene	17.220	146	254910	9.99	ppb	92
72)	n-butylbenzene	17.249	91	445906	10.59	ppb #	87
73)	1,2-Dibromo-3-chloropr...	18.653	157	29751	9.56	ppb	97
74)	1,2,4-Trichlorobenzene	20.138	180	98402	9.28	ppb	94
75)	Hexachlorobutadiene	20.470	225	43729	10.00	ppb	93
76)	Naphthalene	20.576	128	284691	8.35	ppb	87
77)	1,2,3-Trichlorobenzene	21.018	180	90451	9.37	ppb	91

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\06\  
 Data File : 01301013.D  
 Acq On : 6 Dec 2023 2:26 pm  
 Operator : BKP  
 Sample : MDL0102-01 MSD  
 Misc :  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Dec 07 09:07:54 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Dec 04 14:33:00 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
<b>Internal Standards</b>							
1) Fluorobenzene	7.651	96	1310512	20.00	ppb	0.00	
38) Chlorobenzene-d5	12.458	117	2281151	20.00	ppb	0.00	
67) 1,4-Dichlorobenzene-d4	16.521	152	1082444	20.00	ppb	0.00	
<b>System Monitoring Compounds</b>							
2) 1,2-Dichloroethane-d4	7.155	65	473150	20.50	ppb	0.00	
Spiked Amount 20.000	Range 85 - 115		Recovery	= 102.50%			
24) Dibromofluoromethane	6.663	111	385767	21.58	ppb	0.00	
Spiked Amount 20.000			Recovery	= 107.90%			
32) Toluene-d8	10.105	98	1864619	21.45	ppb	0.00	
Spiked Amount 20.000			Recovery	= 107.25%			
54) Bromofluorobenzene	14.488	95	1391371	20.54	ppb	0.00	
Spiked Amount 20.000			Recovery	= 102.70%			
68) 1,2-Dichlorobenzene-d4	17.188	152	901892	19.55	ppb	0.00	
Spiked Amount 20.000			Recovery	= 97.75%			
<b>Target Compounds</b>							
							Qvalue
3) Dichlorodifluoromethane	1.054	85	97977	8.77	ppb		99
4) Chloromethane	1.261	50	218029	9.80	ppb		98
5) Vinyl chloride	1.413	62	295251	10.31	ppb		98
6) Bromomethane	1.883	96	122435	11.39	ppb		94
7) Chloroethane	2.032	64	186479	10.31	ppb		98
8) Trichlorofluoromethane	2.395	101	369495	10.62	ppb		98
9) Diethyl ether	2.869	59	346300	9.76	ppb		90
10) 1,1-Dichloroethene	3.178	61	468934	9.90	ppb		91
11) Acetone	3.352	43	111424	10.04	ppb		86
12) Methyl iodide	3.401	142	220617	9.95	ppb		92
13) Carbon disulfide	3.477	76	865640	10.36	ppb		100
14) Methylene chloride	3.977	84	294182	10.28	ppb		92
15) MTBE (2-methoxy-2-meth...	4.404	73	1180043	9.65	ppb		90
16) trans-1,2-Dichloroethene	4.382	61	525873	9.86	ppb	#	76
17) Acrylonitrile	4.464	53	125503	10.08	ppb		99
18) 1,1-Dichloroethane	5.031	63	675641	9.90	ppb		97
19) Methyl ethyl ketone	6.026	43	206175	9.89	ppb		86
20) 2,2-Dichloropropane	5.895	77	478559	10.00	ppb		100
21) cis-1,2-Dichloroethene	5.926	96	328126	9.92	ppb		99
22) Bromochloromethane	6.281	130	186684	10.33	ppb		97
23) Chloroform	6.418	83	572059	9.98	ppb		95
25) 1,1,1-Trichloroethane	6.644	97	456318	10.05	ppb		78
26) 1,1-Dichloropropene	6.898	75	502714	10.07	ppb		73
27) Carbon tetrachloride	6.881	117	340192	10.30	ppb		97
28) Benzene	7.210	78	1519545	9.83	ppb		100
29) 1,2-Dichloroethane	7.271	62	522733	10.01	ppb		96
30) Trichloroethene	8.204	130	312529	10.18	ppb	#	85
31) 1,2-Dichloropropane	8.555	63	421509	9.79	ppb		97
33) Dibromomethane	8.747	174	174029	10.20	ppb	#	36
34) Bromodichloromethane	9.000	83	428396	10.02	ppb		93
35) cis-1,3-Dichloropropene	9.711	75	584381	9.33	ppb		77
36) Methyl isobutyl ketone	9.995	43	525531	9.70	ppb		89

37)	Toluene	10.209	91	1366351	9.89	ppb	98
39)	trans-1,3-Dichloropropene	10.621	75	509334	8.35	ppb	80
40)	1,1,2-Trichloroethane	10.898	97	307488	8.98	ppb	87
41)	Tetrachloroethene	11.071	166	276487	8.74	ppb	90
42)	2-Hexanone	11.370	43	335803	8.84	ppb	89
43)	1,3-Dichloropropane	11.163	76	605522	8.89	ppb	100
44)	Dibromochloromethane	11.518	129	250896	8.55	ppb	99
45)	1,2-Dibromoethane	11.686	107	276063	8.89	ppb	97
46)	Chlorobenzene	12.504	112	703565	8.78	ppb	# 77
47)	1,1,1,2-Tetrachloroethane	12.658	131	235326	8.95	ppb	99
48)	Ethylbenzene	12.709	91	1246779	8.86	ppb	91
49)	m+p-Xylene	12.912	91	1829008	17.97	ppb	88
50)	o-Xylene	13.583	91	870524	8.87	ppb	87
51)	Styrene	13.618	104	667754	8.35	ppb	81
52)	Bromoform	13.918	173	113327	7.81	ppb	94
53)	Isopropylbenzene	14.233	105	864696	9.03	ppb	96
55)	Bromobenzene	14.725	156	200274	8.75	ppb	# 41
56)	n-Propylbenzene	14.954	91	1045464	9.07	ppb	# 88
57)	1,3,5-Trimethylbenzene	15.281	105	588154	9.11	ppb	93
58)	2-Chlorotoluene	15.076	91	601281	8.92	ppb	# 79
59)	4-Chlorotoluene	15.278	91	679176	8.94	ppb	# 78
60)	tert-Butylbenzene	15.842	91	321079	8.98	ppb	# 75
61)	1,1,2,2-Tetrachloroethane	14.802	83	322747	9.14	ppb	91
62)	trans-1,4-Dichloro-2-b...	14.918	53	97207	7.96	ppb	88
63)	1,2,3-Trichloropropane	14.852	110	91867	8.98	ppb	94
64)	1,2,4-Trimethylbenzene	15.934	105	569116	9.18	ppb	95
65)	sec-Butylbenzene	16.235	105	663585	9.13	ppb	# 89
66)	4-Isopropyltoluene	16.514	119	514808	9.02	ppb	# 94
69)	1,3-Dichlorobenzene	16.399	146	284951	8.67	ppb	93
70)	1,4-Dichlorobenzene	16.563	146	301478	8.74	ppb	94
71)	1,2-Dichlorobenzene	17.220	146	256769	8.46	ppb	93
72)	n-butylbenzene	17.249	91	443858	8.86	ppb	# 89
73)	1,2-Dibromo-3-chloropr...	18.654	157	30790	8.30	ppb	95
74)	1,2,4-Trichlorobenzene	20.139	180	100437	7.96	ppb	98
75)	Hexachlorobutadiene	20.471	225	44932	8.64	ppb	97
76)	Naphthalene	20.577	128	300256	7.43	ppb	87
77)	1,2,3-Trichlorobenzene	21.018	180	94642	8.24	ppb	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\06\  
 Data File : 01501015.D  
 Acq On : 6 Dec 2023 3:25 pm  
 Operator : BKP  
 Sample : MDL0104-01  
 Misc : 1000X  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: Dec 07 09:08:25 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Dec 04 14:33:00 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	7.652	96	1287453	20.00	ppb	0.00
38) Chlorobenzene-d5	12.459	117	2233005	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.522	152	1054380	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.160	65	482581	21.29	ppb	0.01
Spiked Amount	20.000	Range 85 - 115	Recovery	=	106.45%	
24) Dibromofluoromethane	6.667	111	376660	21.45	ppb	0.01
Spiked Amount	20.000		Recovery	=	107.25%	
32) Toluene-d8	10.107	98	1790409	20.96	ppb	0.00
Spiked Amount	20.000		Recovery	=	104.80%	
54) Bromofluorobenzene	14.490	95	1307142	19.71	ppb	0.00
Spiked Amount	20.000		Recovery	=	98.55%	
68) 1,2-Dichlorobenzene-d4	17.188	152	898311	20.00	ppb	0.00
Spiked Amount	20.000		Recovery	=	100.00%	
Target Compounds						
11) Acetone	3.373	43	20588	0.56	ppb	87
37) Toluene	10.214	91	124791	0.92	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\06\  
 Data File : 01601016.D  
 Acq On : 6 Dec 2023 3:54 pm  
 Operator : BKP  
 Sample : MDL0104-02  
 Misc : 1000X  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: Dec 07 09:14:29 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Dec 04 14:33:00 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev (Min)
-----						
Internal Standards						
1) Fluorobenzene	7.649	96	1314387	20.00	ppb	0.00
38) Chlorobenzene-d5	12.457	117	2273309	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.522	152	1012246	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.156	65	482078	20.83	ppb	0.00
Spiked Amount	20.000	Range 85 - 115	Recovery	=	104.15%	
24) Dibromofluoromethane	6.661	111	371948	20.74	ppb	0.00
Spiked Amount	20.000		Recovery	=	103.70%	
32) Toluene-d8	10.104	98	1839849	21.10	ppb	0.00
Spiked Amount	20.000		Recovery	=	105.50%	
54) Bromofluorobenzene	14.488	95	1346009	19.94	ppb	0.00
Spiked Amount	20.000		Recovery	=	99.70%	
68) 1,2-Dichlorobenzene-d4	17.187	152	898906	20.84	ppb	0.00
Spiked Amount	20.000		Recovery	=	104.20%	
Target Compounds						
28) Benzene	7.209	78	130895	0.84	ppb	96
37) Toluene	10.209	91	1245382	8.99	ppb	99
48) Ethylbenzene	12.708	91	1035132	7.38	ppb	91
49) m+p-Xylene	12.910	91	1889742	18.63	ppb	87
50) o-Xylene	13.582	91	812262	8.30	ppb	90
53) Isopropylbenzene	14.233	105	219305	2.30	ppb	97
56) n-Propylbenzene	14.956	91	583968	5.09	ppb	# 87
57) 1,3,5-Trimethylbenzene	15.280	105	496263	7.72	ppb	96
64) 1,2,4-Trimethylbenzene	15.934	105	1703438	27.57	ppb	91
65) sec-Butylbenzene	16.235	105	272161	3.76	ppb	# 90
66) 4-Isopropyltoluene	16.513	119	122663	2.16	ppb	# 89
76) Naphthalene	20.575	128	205029	5.50	ppb	83
-----						

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\06\  
 Data File : 01701017.D  
 Acq On : 6 Dec 2023 4:23 pm  
 Operator : BKP  
 Sample : MDL0104-03  
 Misc : 1000X  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: Dec 07 09:14:06 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Dec 04 14:33:00 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	7.651	96	1393449	20.00	ppb	0.00
38) Chlorobenzene-d5	12.458	117	2383122	20.00	ppb	0.00
67) 1,4-Dichlorobenzene-d4	16.522	152	1065511	20.00	ppb	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4	7.160	65	497963	20.30	ppb	0.01
Spiked Amount 20.000	Range 85 - 115		Recovery	= 101.50%		
24) Dibromofluoromethane	6.666	111	395310	20.80	ppb	0.00
Spiked Amount 20.000			Recovery	= 104.00%		
32) Toluene-d8	10.105	98	1936559	20.95	ppb	0.00
Spiked Amount 20.000			Recovery	= 104.75%		
54) Bromofluorobenzene	14.489	95	1410078	19.93	ppb	0.00
Spiked Amount 20.000			Recovery	= 99.65%		
68) 1,2-Dichlorobenzene-d4	17.187	152	939732	20.70	ppb	0.00
Spiked Amount 20.000			Recovery	= 103.50%		
Target Compounds						Qvalue
28) Benzene	7.212	78	113351	0.69	ppb	95
37) Toluene	10.211	91	1096446	7.46	ppb	99
48) Ethylbenzene	12.709	91	905036	6.15	ppb	92
49) m+p-Xylene	12.910	91	1675227	15.75	ppb	87
50) o-Xylene	13.583	91	727436	7.09	ppb	88
53) Isopropylbenzene	14.233	105	202781	2.03	ppb	97
56) n-Propylbenzene	14.956	91	538213	4.47	ppb	# 86
57) 1,3,5-Trimethylbenzene	15.280	105	464392	6.89	ppb	94
64) 1,2,4-Trimethylbenzene	15.934	105	1558424	24.06	ppb	94
65) sec-Butylbenzene	16.235	105	256667	3.38	ppb	# 88
66) 4-Isopropyltoluene	16.513	119	115917	1.94	ppb	# 89
76) Naphthalene	20.575	128	180911	4.66	ppb	81

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : T:\Data2\Voc\HP5975\2023 DATA\DEC\06\  
 Data File : 01901019.D  
 Acq On : 6 Dec 2023 5:22 pm  
 Operator : BKP  
 Sample : 10 PPB VOC CCV 2  
 Misc :  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: Dec 07 09:15:09 2023  
 Quant Method : T:\Data2\Voc\HP5975\2023 METHODS\DEC04.M  
 Quant Title : Purgable Volatile Organics - EPA 524.2, 8260, 624  
 QLast Update : Mon Dec 04 14:33:00 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
-----							
Internal Standards							
1) Fluorobenzene	7.651	96	1456564	20.00	ppb	0.00	
38) Chlorobenzene-d5	12.458	117	2476607	20.00	ppb	0.00	
67) 1,4-Dichlorobenzene-d4	16.521	152	1143635	20.00	ppb	0.00	
System Monitoring Compounds							
2) 1,2-Dichloroethane-d4	7.155	65	502252	19.58	ppb	0.00	
Spiked Amount	20.000	Range 85 - 115	Recovery	=	97.90%		
24) Dibromofluoromethane	6.663	111	415929	20.93	ppb	0.00	
Spiked Amount	20.000		Recovery	=	104.65%		
32) Toluene-d8	10.105	98	2029150	21.00	ppb	0.00	
Spiked Amount	20.000		Recovery	=	105.00%		
54) Bromofluorobenzene	14.488	95	1488256	20.24	ppb	0.00	
Spiked Amount	20.000		Recovery	=	101.20%		
68) 1,2-Dichlorobenzene-d4	17.322	152	679	0.01	ppb	0.14	
Spiked Amount	20.000		Recovery	=	0.05%		
Target Compounds							
							Qvalue
3) Dichlorodifluoromethane	1.053	85	110157	8.87	ppb		100
4) Chloromethane	1.264	50	252679	10.22	ppb		100
5) Vinyl chloride	1.413	62	348172	10.94	ppb		97
6) Bromomethane	1.883	96	145406	12.36	ppb		96
7) Chloroethane	2.032	64	227365	11.44	ppb		100
8) Trichlorofluoromethane	2.398	101	428730	11.09	ppb		96
9) Diethyl ether	2.867	59	444468	11.27	ppb		88
10) 1,1-Dichloroethene	3.178	61	577823	10.98	ppb		90
11) Acetone	3.352	43	152396	12.74	ppb		79
12) Methyl iodide	3.401	142	272334m	11.11	ppb		
13) Carbon disulfide	3.477	76	1041613	11.22	ppb		100
14) Methylene chloride	3.977	84	349935	11.00	ppb		96
15) MTBE (2-methoxy-2-meth...	4.404	73	1506230	11.09	ppb		91
16) trans-1,2-Dichloroethene	4.383	61	642734	10.84	ppb	#	76
17) Acrylonitrile	4.462	53	162301	11.73	ppb		92
18) 1,1-Dichloroethane	5.032	63	834273	11.00	ppb		96
19) Methyl ethyl ketone	6.025	43	253113	10.91	ppb		88
20) 2,2-Dichloropropane	5.894	77	567099	10.66	ppb		96
21) cis-1,2-Dichloroethene	5.926	96	415926	11.32	ppb		99
22) Bromochloromethane	6.281	130	233026	11.60	ppb		99
23) Chloroform	6.419	83	690735	10.84	ppb		98
25) 1,1,1-Trichloroethane	6.644	97	546181	10.82	ppb		85
26) 1,1-Dichloropropene	6.899	75	618373	11.14	ppb		74
27) Carbon tetrachloride	6.881	117	401651	10.94	ppb		99
28) Benzene	7.210	78	1876951	10.92	ppb		99
29) 1,2-Dichloroethane	7.271	62	629193	10.84	ppb		96
30) Trichloroethene	8.204	130	383745	11.24	ppb	#	84
31) 1,2-Dichloropropane	8.554	63	526665	11.00	ppb		97
33) Dibromomethane	8.747	174	219054	11.55	ppb	#	43
34) Bromodichloromethane	9.001	83	518261	10.91	ppb		96
35) cis-1,3-Dichloropropene	9.711	75	733248	10.58	ppb		78
36) Methyl isobutyl ketone	9.994	43	662339	11.05	ppb		91

37)	Toluene	10.210	91	1672639	10.89	ppb	99
39)	trans-1,3-Dichloropropene	10.620	75	638425	9.68	ppb	80
40)	1,1,2-Trichloroethane	10.898	97	371585	10.00	ppb #	86
41)	Tetrachloroethene	11.071	166	429256	12.50	ppb	90
42)	2-Hexanone	11.368	43	418419	10.16	ppb	88
43)	1,3-Dichloropropane	11.163	76	744160	10.07	ppb	99
44)	Dibromochloromethane	11.518	129	318696	10.00	ppb	96
45)	1,2-Dibromoethane	11.687	107	344097	10.20	ppb	99
46)	Chlorobenzene	12.505	112	862573	9.91	ppb #	77
47)	1,1,1,2-Tetrachloroethane	12.658	131	284650	9.97	ppb	95
48)	Ethylbenzene	12.709	91	1524652	9.98	ppb	91
49)	m+p-Xylene	12.913	91	2231846	20.20	ppb	87
50)	o-Xylene	13.583	91	1085470	10.19	ppb	89
51)	Styrene	13.619	104	827286	9.56	ppb	81
52)	Bromoform	13.917	173	146924	9.32	ppb	99
53)	Isopropylbenzene	14.233	105	1077110	10.36	ppb	98
55)	Bromobenzene	14.725	156	244668	9.84	ppb #	38
56)	n-Propylbenzene	14.954	91	1252445	10.01	ppb #	87
57)	1,3,5-Trimethylbenzene	15.281	105	713748	10.19	ppb	96
58)	2-Chlorotoluene	15.076	91	721342	9.86	ppb #	79
59)	4-Chlorotoluene	15.279	91	831282m	10.08	ppb	
60)	tert-Butylbenzene	15.842	91	394437	10.17	ppb #	72
61)	1,1,2,2-Tetrachloroethane	14.802	83	377207	9.84	ppb	89
62)	trans-1,4-Dichloro-2-b...	14.919	53	121738	9.19	ppb	97
63)	1,2,3-Trichloropropane	14.852	110	110792	9.98	ppb	99
64)	1,2,4-Trimethylbenzene	15.934	105	693487	10.30	ppb	92
65)	sec-Butylbenzene	16.235	105	815144	10.33	ppb #	90
66)	4-Isopropyltoluene	16.514	119	623480	10.06	ppb #	94
69)	1,3-Dichlorobenzene	16.399	146	341412	9.83	ppb	93
70)	1,4-Dichlorobenzene	16.563	146	351936	9.66	ppb	93
71)	1,2-Dichlorobenzene	17.220	146	308328	9.61	ppb	92
72)	n-butylbenzene	17.249	91	518129	9.79	ppb #	88
73)	1,2-Dibromo-3-chloropr...	18.654	157	37600	9.61	ppb	97
74)	1,2,4-Trichlorobenzene	20.139	180	130065	9.76	ppb	96
75)	Hexachlorobutadiene	20.471	225	53805	9.79	ppb	99
76)	Naphthalene	20.578	128	403662	9.38	ppb	87
77)	1,2,3-Trichlorobenzene	21.018	180	119546	9.85	ppb	96

-----  
 (#) = qualifier out of range (m) = manual integration (+) = signals summed

Starting sequence Sun Dec 17 17:38:08 2023

Instrument Name: MSD4

Sequence File: T:\DATA1\MSD4\SEQUENCES\2023\SVICAL.S

Comment: 8270

Operator: MAH

Data Path: T:\DATA1\MSD4\2023\DEC\17\

Method Path: C:\MSDCHEM\1\METHODS\

Line	Type	Vial	DataFile	Method	Sample Name
1)	Sample	1	00101001	SVOCT1	SYS
2)	Sample	2	00201002	SVOCT1	BNA 20 PPM
3)	Sample	3	00301003	SVOCT1	BNA 15 PPM
4)	Sample	4	00401004	SVOCT1	BNA 10 PPM
5)	Sample	5	00501005	SVOCT1	BNA 7.5 PPM
6)	Sample	6	00601006	SVOCT1	BNA 5 PPM
7)	Sample	7	00701007	SVOCT1	BNA 2.5 PPM
8)	Sample	8	00801008	SVOCT1	BNA 0.5 PPM
9)	Sample	9	00901009	SVOCT1	ICV BNA 5 PPM
10)	Sample	11	01101010	SVOCT1	BDK0169-BS1
11)	Sample	12	01201011	SVOCT1	BDK0169-BSD1
12)	Sample	13	01301012	SVOCT1	BDK0169-MS1
13)	Sample	14	01401013	SVOCT1	BDK0169-MSD1
14)	Sample	15	01501014	SVOCT1	BDK0169-BLK1
15)	Sample	1	00101015	SVOCT1	SYS
16)	Sample	16	01601016	SVOCT1	MDK0709-01
17)	Sample	17	01701017	SVOCT1	MDK0709-02
18)	Sample	18	01801018	SVOCT1	MDK0709-03
19)	Sample	19	01901019	SVOCT1	MDK0709-04
20)	Sample	20	02001020	SVOCT1	MDK0709-05
21)	Sample	21	02101021	SVOCT1	MDK0709-06
22)	Sample	22	02201022	SVOCT1	MDK0709-07
23)	Sample	23	02301023	SVOCT1	MDK0709-08
24)	Sample	24	02401024	SVOCT1	MDK0709-09
25)	Sample	25	02501025	SVOCT1	MDK0709-10
26)	Sample	26	02601026	SVOCT1	MDK0709-11
27)	Sample	27	02701027	SVOCT1	MDK0709-12
28)	Sample	28	02801028	SVOCT1	MDK0724-01
29)	Sample	29	02901029	SVOCT1	MDK0735-01
30)	Sample	30	03001030	SVOCT1	MDK0735-01
31)	Sample	4	00401031	SVOCT1	BNA 10 PPM
32)	Sample	31	03101032	SVOCT1	BDL0119-BS1
33)	Sample	32	03201033	SVOCT1	BDL0119-BD1
34)	Sample	33	03301034	SVOCT1	BDL0119-BLK1
35)	Sample	34	03401035	SVOCT1	MDK0690-01
36)	Sample	35	03501036	SVOCT1	MDK0690-01

Sequence completed Mon Dec 18 09:52:38 2023

T:\DATA1\MSD4\2023\DEC\17\2023 Dec 17 1738 Quality Log.LOG

T:\DATA1\MSD4\2023\DEC\17\2023 Dec 17 1738 Sequence Log .LOG



QC Checklist for EPA 8270/625.1 - SOCs

Analysis Date: 12-17-23

<input checked="" type="checkbox"/>	QC Parameter	Acceptance Criteria	Frequency	Notes
<input checked="" type="checkbox"/>	DFTPP Tune	See SOP/Method	Every 12 hours	
<input checked="" type="checkbox"/>	Sys Check	DDT breakdown <20%	Every 12 hours	
<input checked="" type="checkbox"/>	System Performance	Anthracene & phenanthrene baseline separated	Each analysis batch	
<input checked="" type="checkbox"/>	System Performance	Benzo[a]anthracene & chrysene valley >75%	Each analysis batch	
<input checked="" type="checkbox"/>	System Performance	Benzo(b/k)fluoranthenes - valley >50% of average of both peaks	Each analysis batch	
<input checked="" type="checkbox"/>	System Performance	Peak tailing factors for benzidine & PCP <2	Each analysis batch	
<input checked="" type="checkbox"/>	Initial Calibration	90% of compounds RRF RSD <20% 8270: True value within 30%		
<input checked="" type="checkbox"/>	RF	See table on back of this checklist		Include CCRF report in packet
<input checked="" type="checkbox"/>	Internal Standard	±30% of CCV and ±50% of ICAL average	All samples	
<input checked="" type="checkbox"/>	Surrogate Recovery	Per control chart	All samples	
<input checked="" type="checkbox"/>	ICV/QCS	±30%, 50% at MRL	Each ICAL	
<input checked="" type="checkbox"/>	Blanks	No interferences	Each extraction batch	
<input checked="" type="checkbox"/>	CCV - 8270	80-120% - 80% of analytes pass	Each analysis batch w/o an ICAL	<i>KAL</i>
<input checked="" type="checkbox"/>	CCV - 625	80-120% - all reported analytes must pass	Each analysis batch w/o an ICAL	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	MS/MSD or LFB/LFB Dup	Per control chart	Every 20 samples	
<input checked="" type="checkbox"/>	Bench Sheet Present	Standards/reagents noted		
<input checked="" type="checkbox"/>	Cal Prep Form Present	Standards/reagents noted		
<input checked="" type="checkbox"/>	Dilutions Noted?			

Comments:

Analyst: BUM

Checklist Completed Date: 12/19/23

Reviewed By: \_\_\_\_\_

Date: \_\_\_\_\_



**Guidance Response Factors – EPA Method 8270E – Table 4**

2,3,4,6-Tetrachlorophenol	0.01	bis(2-Ethylhexyl)phthalate	0.01
2,4,5-Trichlorophenol	0.2	Butyl benzyl phthalate	0.01
2,4,6-Trichlorophenol	0.2	Carbazole	0.01
2,4-Dichlorophenol	0.2	Chrysene	0.7
2,4-Dimethylphenol	0.2	Dibenz[a,h]anthracene	0.4
2,4-Dinitrophenol	0.01	Dibenzofuran	0.8
2,4-Dinitrotoluene	0.2	Diethyl phthalate	0.01
2,6-Dinitrotoluene	0.2	Dimethyl phthalate	0.01
2-Chloronaphthalene	0.8	Di-n-butyl phthalate	0.01
2-Chlorophenol	0.8	Di-n-octyl phthalate	0.01
3,3'-Dichlorobenzidine	0.01	Fluoranthene	0.6
4,6-Dinitro-2-methylphenol	0.01	Fluorene	0.9
4-Bromophenyl-phenylether	0.1	Hexachlorobenzene	0.1
4-Chloro-3-methylphenol	0.2	Hexachlorobutadiene	0.01
4-Chloroaniline	0.01	Hexachlorocyclopentadiene	0.05
4-Chlorophenyl phenyl ether	0.4	Hexachloroethane	0.3
Acenaphthene	0.9	Indeno[1,2,3-cd]pyrene	0.5
Acenaphthylene	0.9	Isophorone	0.4
Aniline	0.7	Naphthalene	0.7
Benzo[a]anthracene	0.8	Nitrobenzene	0.2
Benzo[a]pyrene	0.7	n-Nitroso-di-n-propylamine	0.5
Benzo[b]fluoranthene	0.7	n-Nitrosodiphenylamine	0.01
Benzo[ghi]perylene	0.5	Pentachlorophenol	0.05
Benzo[k]fluoranthene	0.7	Phenanthrene	0.7
bis(2-Chloroethoxy)methane	0.3	Phenol	0.8
bis(2-Chloroethyl)ether	0.7	Pyrene	0.6
bis(2-chloroisopropyl)ether	0.01		

From Method 8270E, 11.3.4.2. *Table 4 contains minimum RFs that may be used as guidance in determining if the system is behaving properly and as a check to see if calibration standards are prepared correctly. Because the minimum RFs in Table 4 were determined using specific ions and instrument conditions that may vary, it is neither expected nor required that all analytes meet these minimum RFs. The information is provided as guidance only.*

# PREPARATION BENCH SHEET

## Organics

BDL0169

Matrix: Water

Prepared using: SVOC - SVOC Water

**Analyses**

SVOC 8270E

**Spiking Solution(s)**

**Surrogate Solution(s)**

2300782 CLP B/N 1000  
2301428 CLP Acid Surr 2000

Analysis	Lab Number	Sample and Source ID	Date Due	Extract by	Prepared - By	Initial (mL)	Final (mL)	ul Spike	ul Surrogate	Extraction Comments
QC	BDL0169-BLK1	Blank			12/4/23 0:10 MAH	1000	1		25	
QC	BDL0169-BS1	LCS			12/4/23 0:10 MAH	1000	1		25	
QC	BDL0169-BSD1	LCS Dup			12/4/23 0:10 MAH	1000	1		25	
SVOC 8270E	MDK0709-01	O4Q23LCMW01DW	12/11/2023	12/04/2023	12/4/23 0:10 MAH	1000	1		25	check cross table for equis & EIM
SVOC 8270E	MDK0709-02	O4Q23LCMW01SW	12/11/2023	12/04/2023	12/4/23 0:10 MAH	1000	1		25	check cross table for equis & EIM
SVOC 8270E	MDK0709-03	O4Q23LCMW03DW	12/11/2023	12/05/2023	12/4/23 0:10 MAH	1000	1		25	check cross table for equis & EIM
SVOC 8270E	MDK0709-04	O4Q23LCMW03SW	12/11/2023	12/05/2023	12/4/23 0:10 MAH	1000	1		25	check cross table for equis & EIM
SVOC 8270E	MDK0709-05	O4Q23LCMW09DW	12/11/2023	12/04/2023	12/4/23 0:10 MAH	1000	1		25	check cross table for equis & EIM
SVOC 8270E	MDK0709-06	O4Q23LCMW09SW	12/11/2023	12/04/2023	12/4/23 0:10 MAH	1000	1		25	check cross table for equis & EIM
SVOC 8270E	MDK0709-10	O4Q23LCMW02DW	12/11/2023	12/05/2023	12/4/23 0:10 MAH	1000	1		25	check cross table for equis & EIM
SVOC 8270E	MDK0709-11	O4Q23LCMW02SW	12/11/2023	12/05/2023	12/4/23 0:10 MAH	1000	1		25	check cross table for equis & EIM
SVOC 8270E	MDK0709-12	O4Q23LCMW140W	12/11/2023	12/05/2023	12/4/23 0:10 MAH	1000	1		25	check cross table for equis & EIM
SVOC 8270E	MDK0724-01	I311215-01	12/12/2023	12/05/2023	12/4/23 0:10 MAH	1000	1		25	
SVOC 8270E	MDK0735-01	O4Q23LCMW04SW	12/13/2023	12/06/2023	12/4/23 0:10 MAH	1000	1		25	check cross table for equis & EIM
SVOC 8270E	MDK0735-02	O4Q23LCMW04DW	12/13/2023	12/06/2023	12/4/23 0:10 MAH	1000	1		25	check cross table for equis & EIM

  
Analyst: \_\_\_\_\_

Date \_\_\_\_\_

12-17-23  
Run Date: \_\_\_\_\_

Date \_\_\_\_\_

# PREPARATION BENCH SHEET

## Organics

BDL0169

(Continued)

Matrix: Water

Prepared using: SVOC - SVOC Water

### Analyses

SVOC 8270E

### Spiking Solution(s)

### Surrogate Solution(s)

2300782 CLP B/N 1000  
2301428 CLP Acid Surr 2000

### Reagents

<u>Standard</u>	<u>Description</u>	<u>LotNum</u>
2000154	Acetone - GC grade	59074
2000155	H2SO4	58115
2301118	CLP I.S. Spike 2000	061422
2301808	Diazomethane	N/A

### Batch Comments:

Acidic start/stop time: 3PM- 8AM  
Basic start/stop tiime: 8AM-3PM  
Instrument: 7890/5975 GCMS  
Ext. Method: 3520C liq-liq/Waste Dilution/Microextr  
TurboVap: 01  
Balance: 04

Analyst: \_\_\_\_\_

Date \_\_\_\_\_

Run Date: \_\_\_\_\_

Date \_\_\_\_\_

# PREPARATION BENCH SHEET

## Organics

BDL0119

Matrix: Solid

Prepared using: SVOC - SVOC Solid

**Analyses**

SVOC 8270E

**Spiking Solution(s)**

2302382 8270 Spike 100ppm

**Surrogate Solution(s)**

2303388 CLP Acid Surr 2000  
2303399 CLP B/N 1000

Analysis	Lab Number	Sample and Source ID	Date Due	Extract by	Prepared - By	Initial (g)	Final (mL)	ul Spike	ul Surrogate	Extraction Comments
QC	BDL0119-BLK1	Blank			12/4/23 15:00 BMM	5	1		25	
QC	BDL0119-BS1	LCS			12/4/23 15:00 BMM	5	1	25	25	
QC	BDL0119-BSD1	LCS Dup			12/4/23 15:00 BMM	5	1	25	25	
QC	BDL0119-MS1	Matrix Spike [MDK0690-01]			12/4/23 15:00 BMM	5	1	25	25	
QC	BDL0119-MSD1	Matrix Spike Dup [MDK0690-01]			12/4/23 15:00 BMM	5	1	25	25	
SVOC 8270E	MDK0690-01	23_71573	12/06/2023	12/11/2023	12/4/23 15:00 BMM	5	1		25	
SVOC 8270E	YDK0569-02	B 2	12/08/2023	12/11/2023	12/4/23 15:00 BMM	5	1		25	

BAL-04

**Reagents**

Standard	Description	LotNum
2103208	ASE 350 cellulose filters	114414
2202758	Acetone	62175
2202955	Hydromatrix	6610275-17
2203317	Na2SO4 muffled	2201308
2203657	Dichloromethane	62161

Analyst:

Date

Run Date: 12-17-23

Date



**Semivolatiles Calibration Standard Preparation Form**  
**Methods 625.1/8270E**

**ICAL Spiking Solution Preparation Template**

Standard	Number	Exp. Date	Concentration (mg/L)
8270 Mega Mix	2301150	4/24	1000
$\alpha$ -Terpineol	2302589	1/26	1000
Benzoic Acid	2102951	1/25	2000
Benzidine Mix	2200999	12/25	2000
<i>CLP Acid Surrogate</i>	2301428	2/24	2000
<i>CLP B/N Surrogate</i>	2300782	2/24	1000
<i>CLP Internal Standard</i>	2301118	3/24	2000

**ICAL Dilution Template**

Desired Conc. (mg/L)	Stock Concentration (mg/L)	Standards Added n=4 (uL each)	Surrogates n=2 (uL each)	IS (uL)	Final Volume (uL)
20 / 40	1000 / 2000	20	25	10	1000
15 / 30	1000 / 2000	15	25	10	1000
10 / 20	1000 / 2000	10	25	10	1000
7.5/15	1000 / 2000	7.5	25	10	1000
5 / 10	1000 / 2000	5	25	10	1000
2.5 / 5	1000 / 2000	2.5	25	10	1000
0.5 / 1.0	1000 / 2000	0.5	25	10	1000

**ICV Preparation Template – 5 ppm**

Standard	Number	Expiration	Conc. (mg/L)	Amt. Added (uL)	Final Vol. (uL)
8270 MS/ICV Std.	2302382	7/24	100	50	1000
<i>CLP Acid Surrogate</i>	2301428	4/24	2000	25	
<i>CLP B/N Surrogate</i>	2300782	2/24	1000	25	
<i>CLP Internal Standard</i>	2301118	3/24	2000	10	

MeCl <sub>2</sub> Reagent	2300161	Exp. Date	3/28	
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### SVOC System Check by Endrin and DDT Breakdown

Date 12/17/2023  
Data File Name 00101001  
Operator BMM

#### Compound

Endrin  
Endrin Aldehyde  
Endrin Ketone  
**% Breakdown #DIV/0!**  
**Criteria ± 20%**  
**Results #DIV/0!**

#### Compound

DDT 4.34E+07  
DDD 3339972  
DDE 580675  
**% Breakdown 8.28%**  
**Criteria ± 20%**  
**Results Pass**

BMM  
12/18/23

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 00101001.D  
 Acq On : 17 Dec 2023 5:39 pm  
 Operator : MAH  
 Sample : SYS  
 Misc :  
 ALS Vial : 1 Sample Multiplier: 1

Integration File: events.e

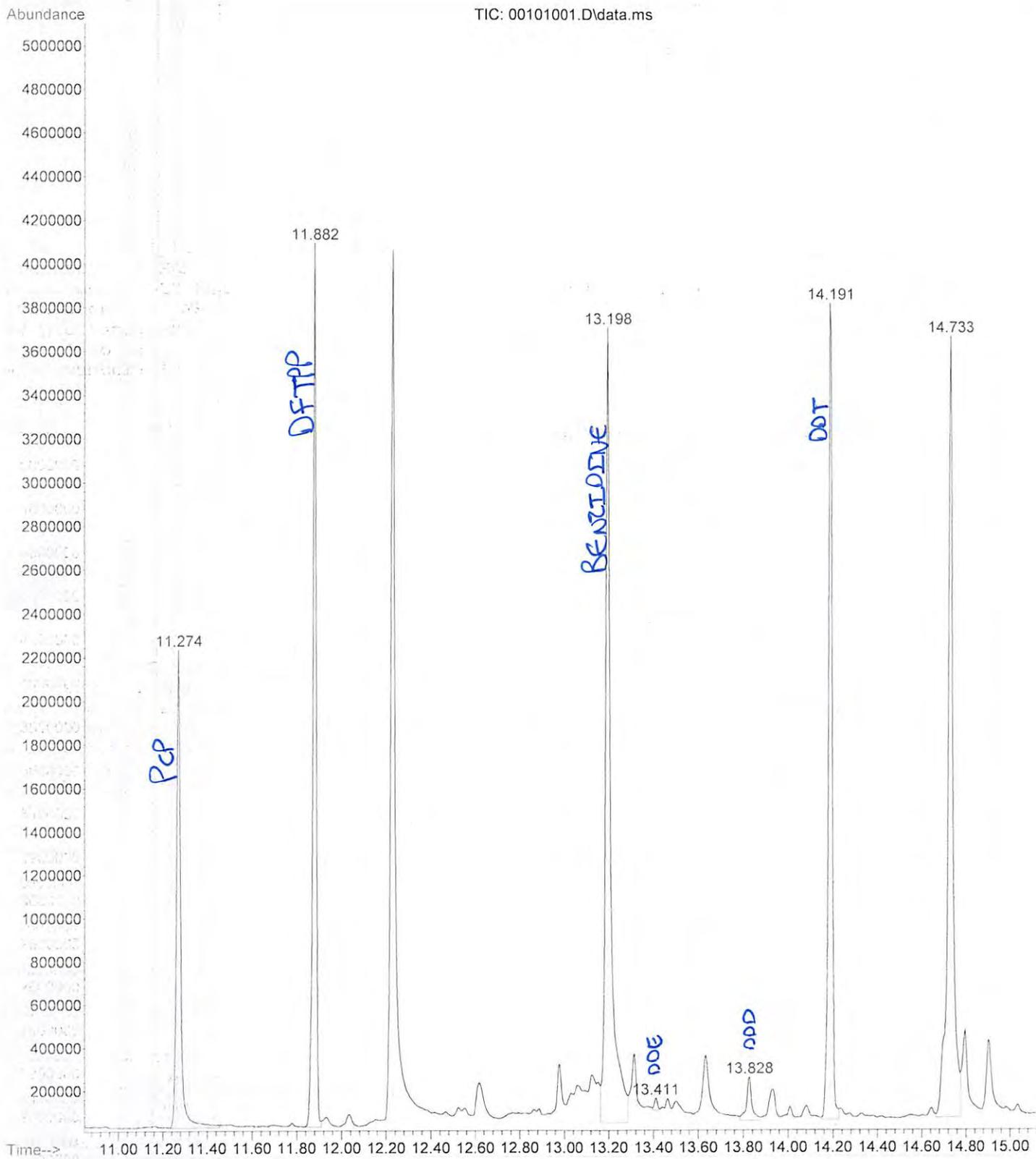
Method : T:\Data1\MSD4\METHODS\2023\OP-1213.M  
 Title : EPA 8270D - GC MSD4  
 Last Update : Fri Dec 15 15:09:18 2023

AutoFind: Scans 1938, 1939, 1940; Background Corrected with Scan 1928

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	25.3	94088	PASS
68	69	0.00	2	1.7	1890	PASS
69	198	0.00	100	29.5	109987	PASS
70	69	0.00	2	0.6	632	PASS
127	198	25	75	43.4	161512	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	372245	PASS
199	198	5	9	6.6	24492	PASS
275	198	10	60	30.1	111867	PASS
365	198	0.00	100	3.8	14117	PASS
441	443	0.01	100	72.8	90120	PASS
442	198	39	200	169.2	629909	PASS
443	442	15	24	19.7	123835	PASS

OP-1213.M Mon Dec 18 09:39:58 2023

File :T:\Data1\MSD4\2023\DEC\17\00101001.D  
Operator : MAH  
Acquired : 17 Dec 2023 5:39 pm using AcqMethod SVOCT1.M  
Instrument : MSD4  
Sample Name: SYS  
Misc Info :  
Vial Number: 1



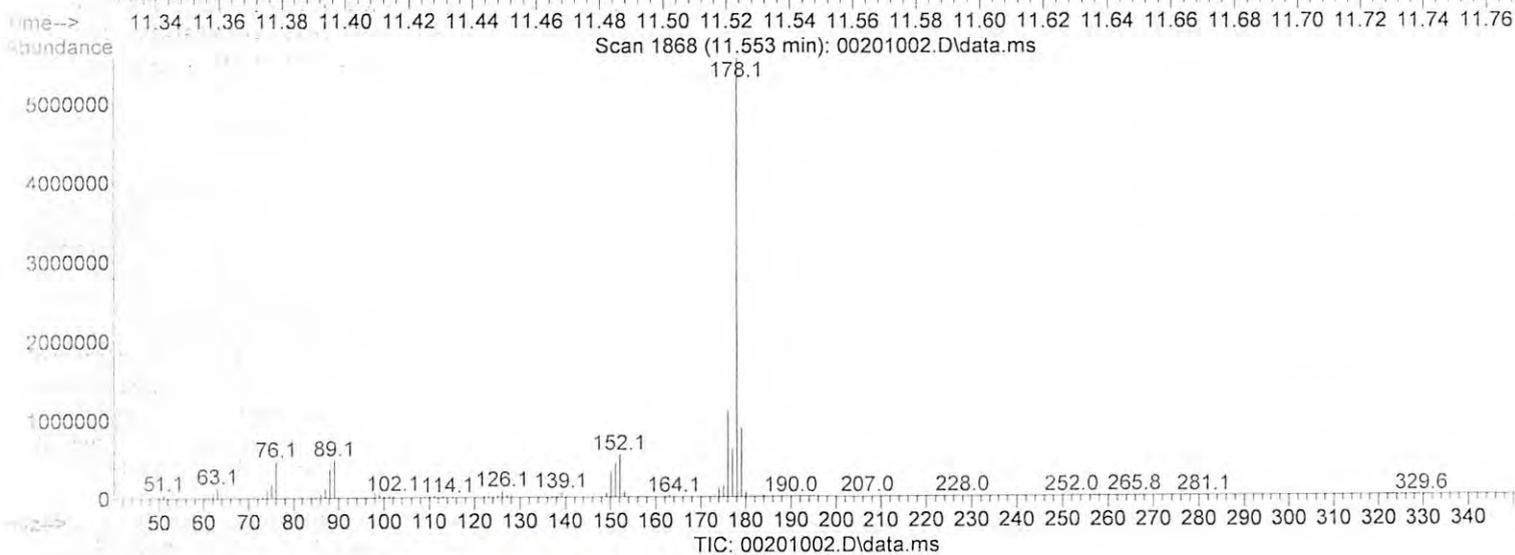
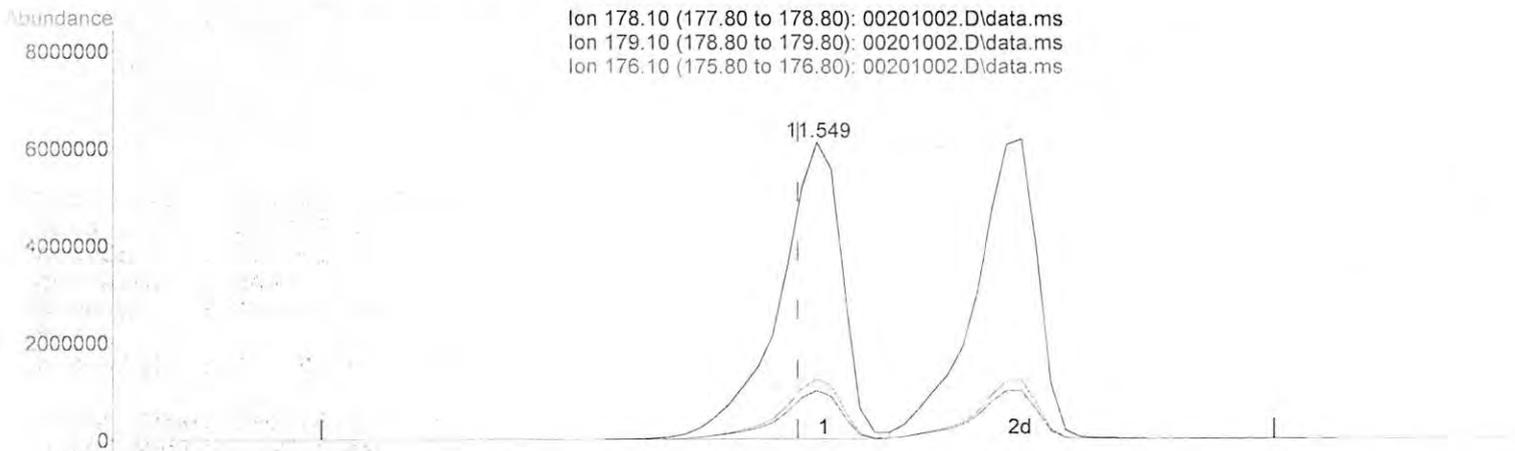
Peak #	Ret Time	Type	width	Area	Start Time	End Time
1	11.274	VV	0.021	29102884	11.230	11.455
2	11.882	VV	0.017	41304825	11.834	11.910
3*	13.198	VV	0.024	60135850	13.163	13.287
4	13.411	M	0.016	580675	13.394	13.425
5	13.828	VV	0.024	3339972	13.785	13.878
6	14.191	VV	0.018	43416048	14.146	14.227
7	14.733	VV	0.024	56566788	14.664	14.776

DOE  
BOY

Quantitation Report (Qedit)

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 00201002.D  
 Acq On : 17 Dec 2023 6:06 pm  
 Operator : MAH  
 Sample : BNA 20 PPM  
 Misc :  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 18 09:46:58 2023  
 Quant Method : T:\Data1\MSD4\METHODS\2023\BNA-1217.M  
 Quant Title : EPA 8270D / EPA 625.1 - MSD4  
 QLast Update : Thu Dec 14 10:10:53 2023  
 Response via : Initial Calibration



(69) Phenanthrene / ANTHRACENE

11.551min (+ 0.008) 17.12 ug/mL

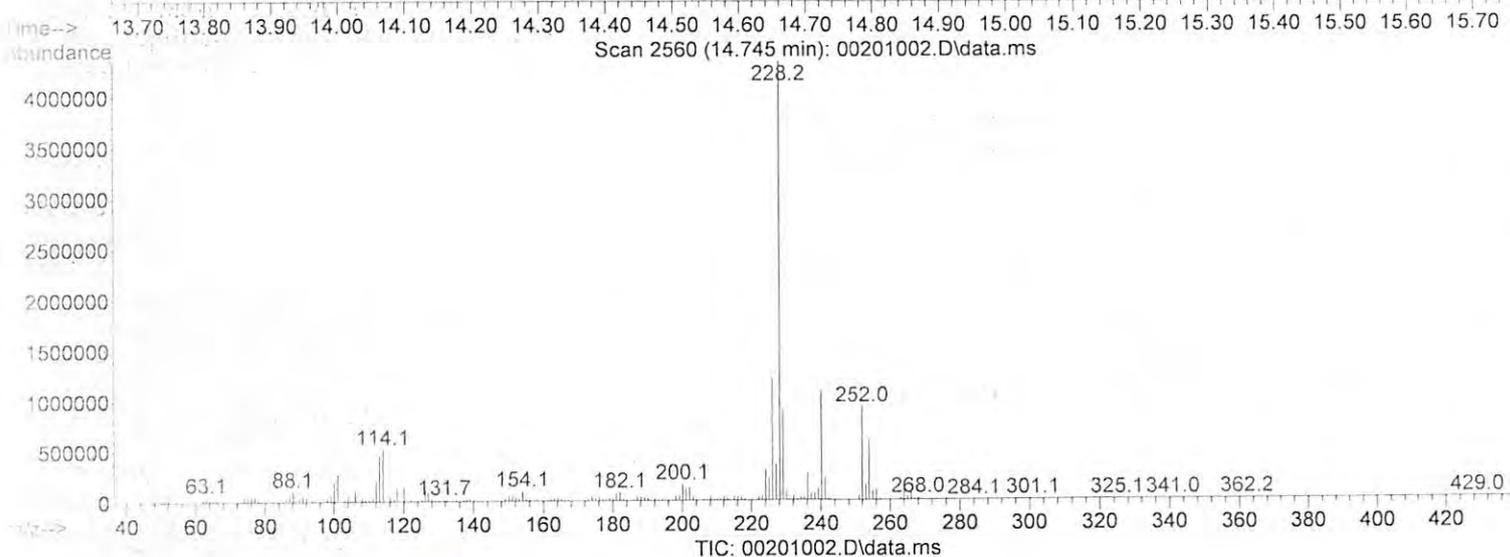
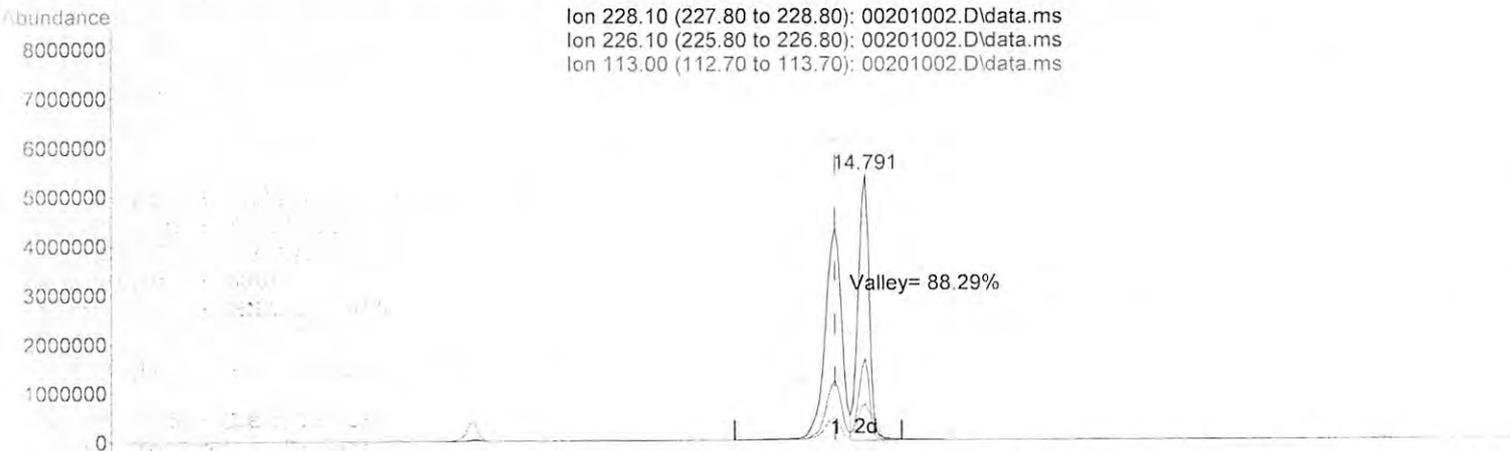
response 84217457

Ion	Exp%	Act%
178.10	100.00	100.00
179.10	16.00	15.88
176.10	19.90	19.44
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 00201002.D  
 Acq On : 17 Dec 2023 6:06 pm  
 Operator : MAH  
 Sample : BNA 20 PPM  
 Misc :  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 18 09:46:58 2023  
 Quant Method : T:\Data1\MSD4\METHODS\2023\BNA-1217.M  
 Quant Title : EPA 8270D / EPA 625.1 - MSD4  
 QLast Update : Thu Dec 14 10:10:53 2023  
 Response via : Initial Calibration



(80) Benzo[a]anthracene / CHRYSENE

14.747min (+ 0.001) 18.64 ug/mL

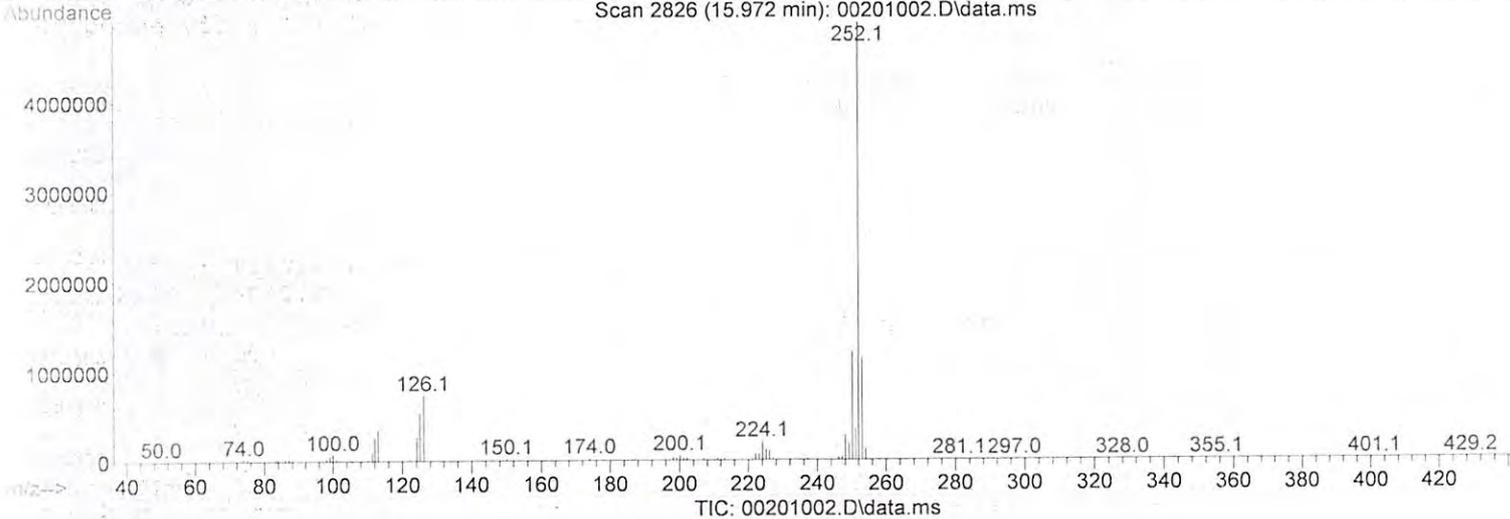
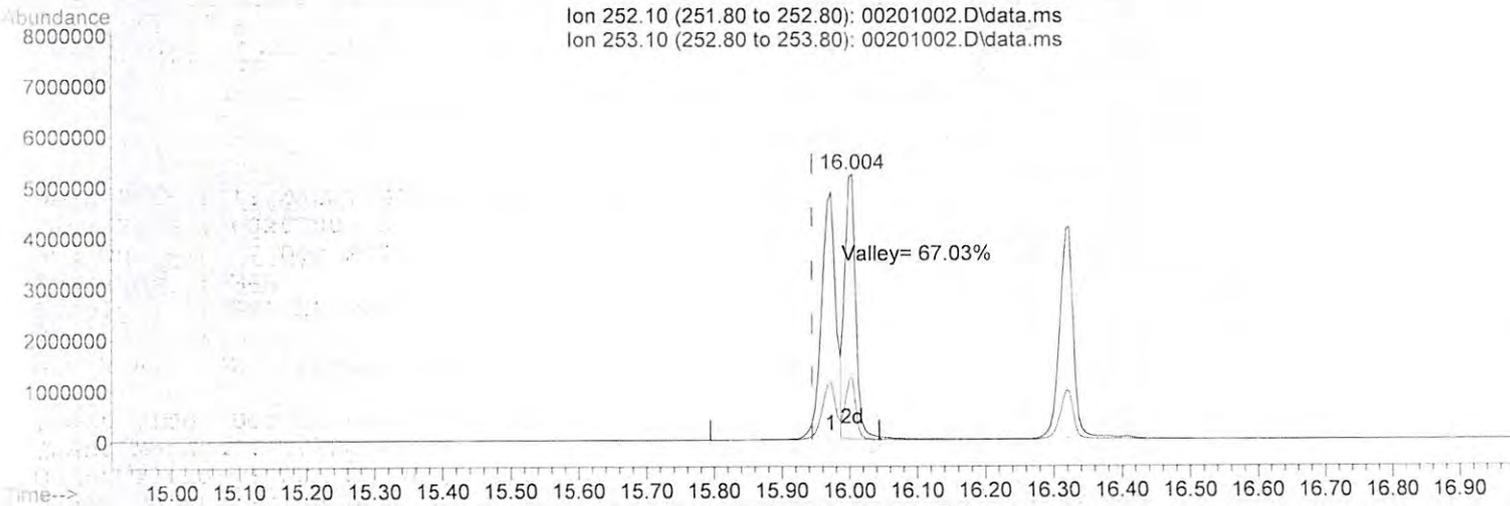
response 72359798

Ion	Exp%	Act%
228.10	100.00	100.00
226.10	27.70	27.17
113.00	12.10	10.08
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 00201002.D  
 Acq On : 17 Dec 2023 6:06 pm  
 Operator : MAH  
 Sample : BNA 20 PPM  
 Misc :  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 18 09:46:58 2023  
 Quant Method : T:\Data1\MSD4\METHODS\2023\BNA-1217.M  
 Quant Title : EPA 8270D / EPA 625.1 - MSD4  
 QLast Update : Thu Dec 14 10:10:53 2023  
 Response via : Initial Calibration



(86) Benzo[b]fluoranthene / **BENZO[K] FLUORANTHENE**

15.972min (+ 0.028) 21.60 ug/mL m

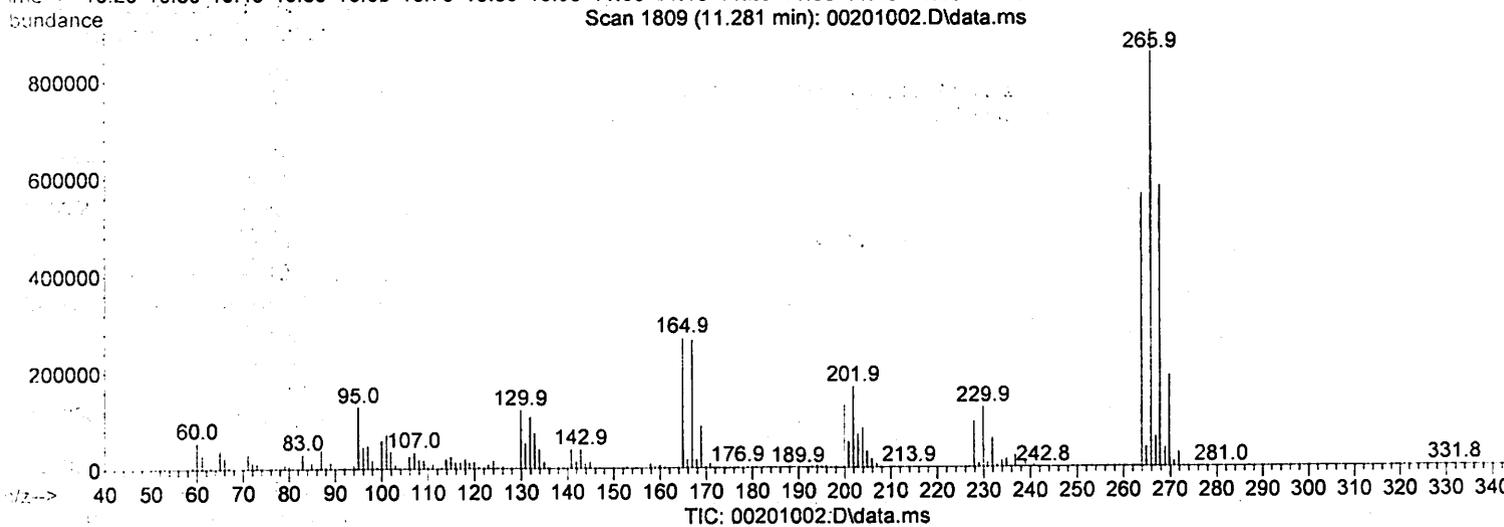
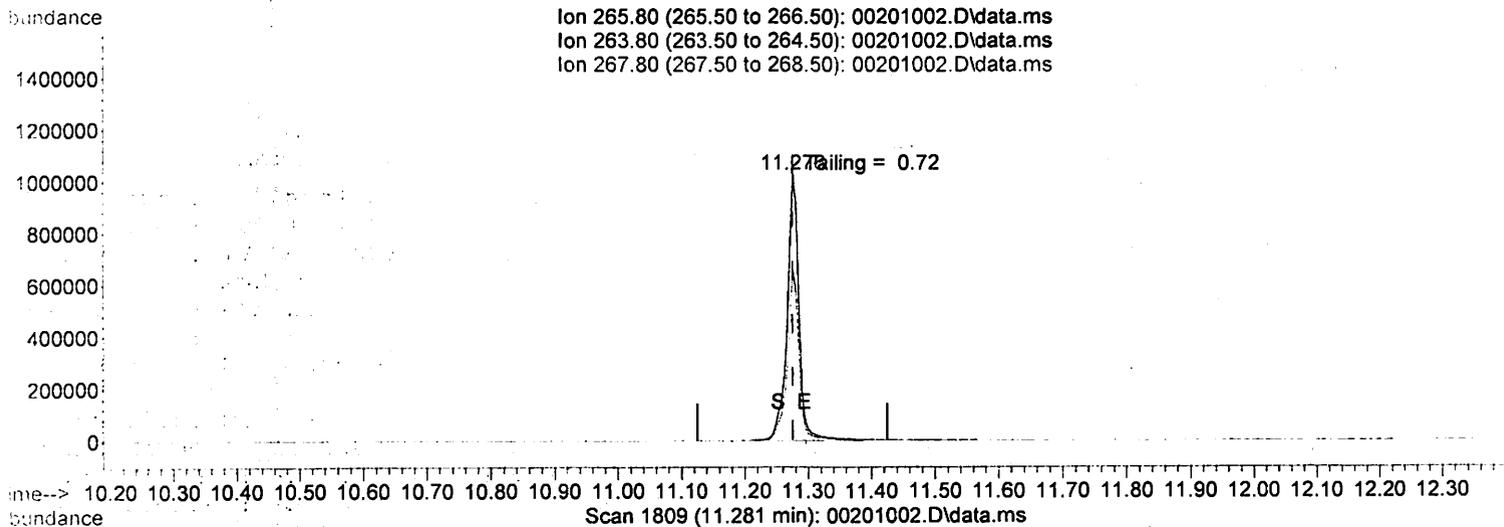
response 73123126

Ion	Exp%	Act%
252.10	100.00	100.00
253.10	20.10	20.48
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 00201002.D  
 Acq On : 17 Dec 2023 6:06 pm  
 Operator : MAH  
 Sample : BNA 20 PPM  
 Misc :  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 18 09:46:58 2023  
 Quant Method : T:\Data1\MSD4\METHODS\2023\BNA-1217.M  
 Quant Title : EPA 8270D / EPA 625.1 - MSD4  
 Qlast Update : Thu Dec 14 10:10:53 2023  
 Response via : Initial Calibration



(68) Pentachlorophenol

11.279min (+ 0.004) 20.22 ug/mL

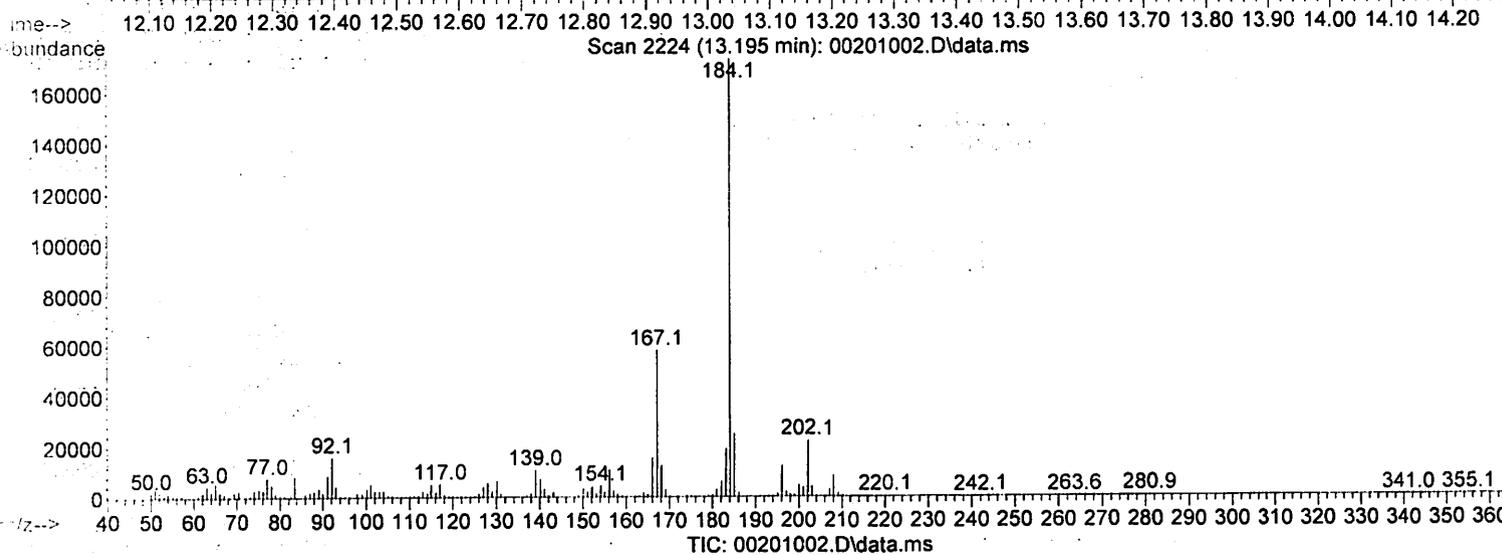
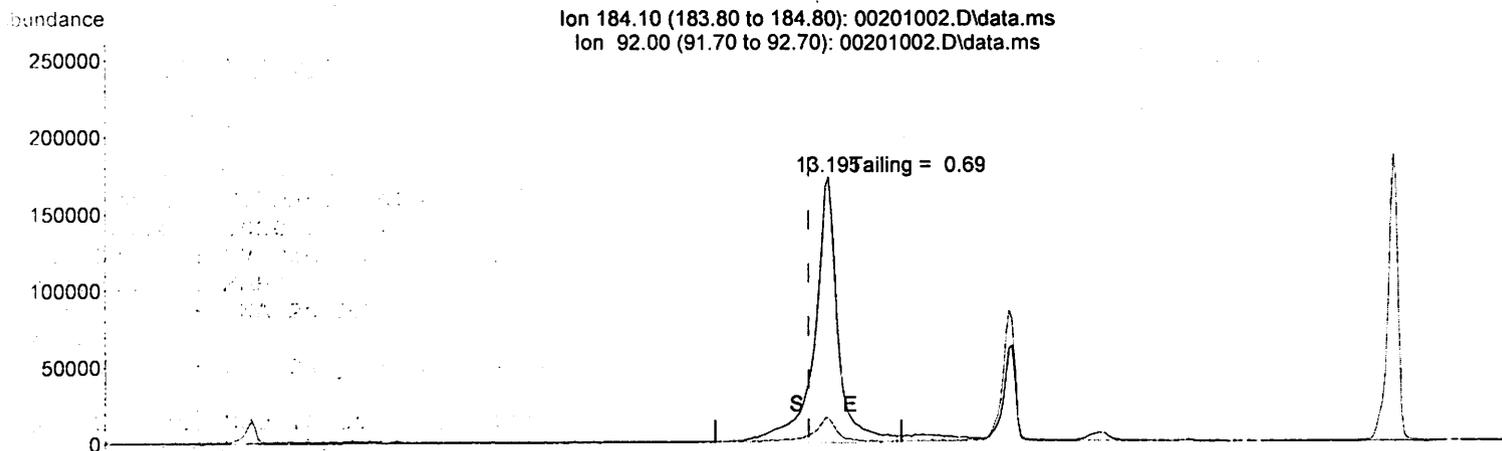
response 13120386

Ion	Exp%	Act%
265.80	100.00	100.00
263.80	63.00	62.88
267.80	64.20	64.29
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 00201002.D  
 Acq On : 17 Dec 2023 6:06 pm  
 Operator : MAH  
 Sample : BNA 20 PPM  
 Misc :  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 18 09:46:58 2023  
 Quant Method : T:\Data1\MSD4\METHODS\2023\BNA-1217.M  
 Quant Title : EPA 8270D / EPA 625.1 - MSD4  
 QLast Update : Thu Dec 14 10:10:53 2023  
 Response via : Initial Calibration



(74) Benzidine

13.196min (+ 0.033) 16.61 ug/mL

response 4106437

Ion	Exp%	Act%
184.10	100.00	100.00
92.00	9.70	8.74
0.00	0.00	0.00
0.00	0.00	0.00

### SVOC System Check by Endrin and DDT Breakdown

Date 12/17/2023  
Data File Name 00101015  
Operator BMM

#### Compound

Endrin  
Endrin Aldehyde  
Endrin Ketone  
**% Breakdown #DIV/0!**  
**Criteria ± 20%**  
**Results #DIV/0!**

#### SVOC System Check by Endrin and DDT Breakdown

Compound  
Date  
DDT 4.48E+07  
DDD 2830659  
DDE 422559  
**% Breakdown 6.77%**  
**Criteria ± 20%**  
**Results Pass**

*BMM  
12/18/23*

Endrin Aldehyde  
Endrin Ketone  
**% Breakdown**  
**Criteria**  
**Results**

#### SVOC System Check by Endrin and DDT Breakdown

Compound  
Date  
DDT  
DDD  
DDE  
**% Breakdown**  
**Criteria**  
**Results**

Endrin Aldehyde  
Endrin Ketone  
**% Breakdown**  
**Criteria**  
**Results**

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 00101015.D  
 Acq On : 18 Dec 2023 12:00 am  
 Operator : MAH  
 Sample : SYS  
 Misc :  
 ALS Vial : 1 Sample Multiplier: 1

Integration File: events.e

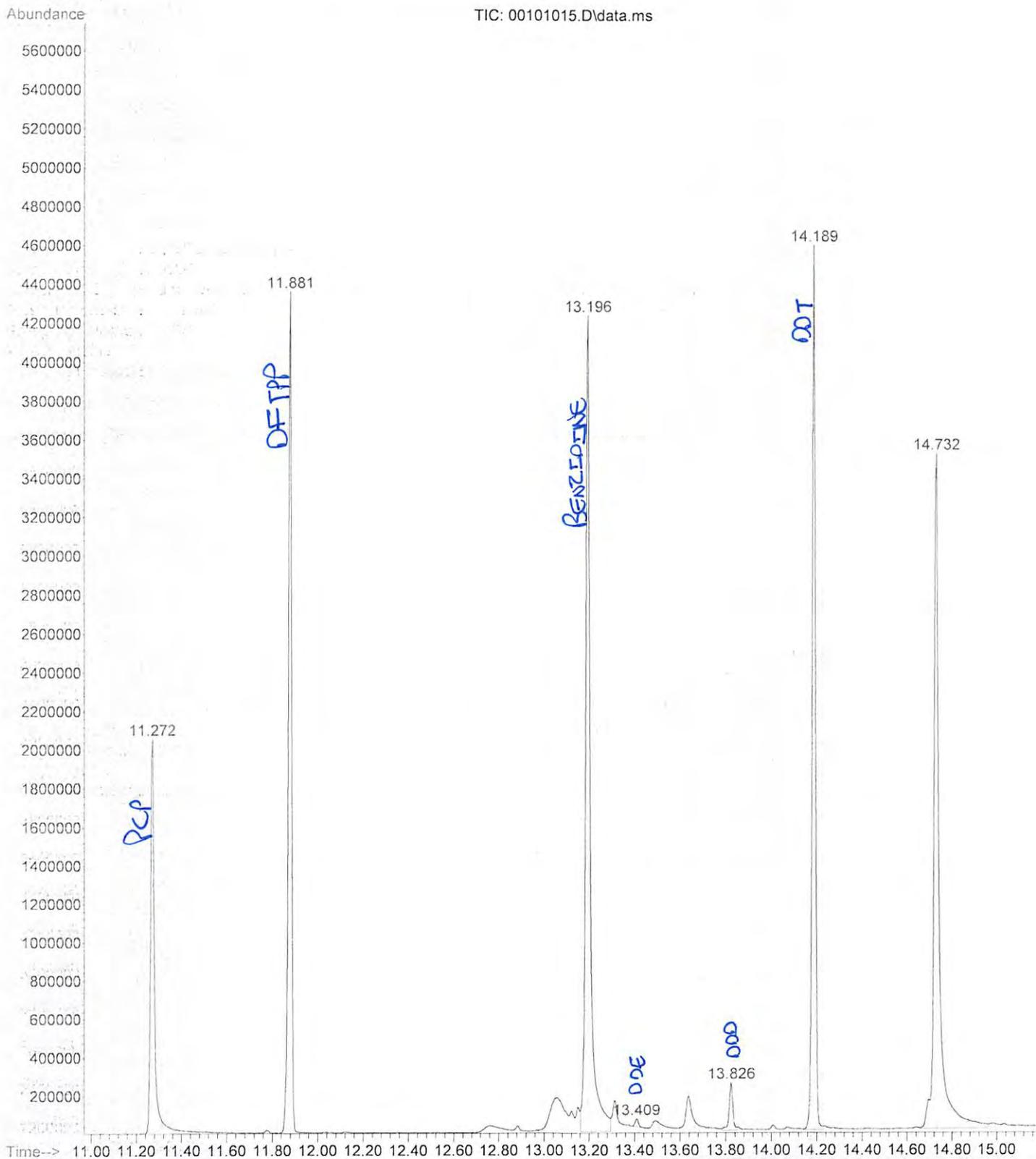
Method : T:\Data1\MSD4\METHODS\2023\OP-1213.M  
 Title : EPA 8270D - GC MSD4  
 Last Update : Fri Dec 15 15:09:18 2023

AutoFind: Scans 1938, 1939, 1940; Background Corrected with Scan 1928

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	23.1	90669	PASS
68	69	0.00	2	1.6	1710	PASS
69	198	0.00	100	27.1	106186	PASS
70	69	0.00	2	0.6	589	PASS
127	198	25	75	41.3	161920	PASS
197	198	0.00	1	0.3	1080	PASS
198	198	100	100	100.0	392363	PASS
199	198	5	9	6.7	26200	PASS
275	198	10	60	31.6	124101	PASS
365	198	0.00	100	4.1	16113	PASS
441	443	0.01	100	74.2	108504	PASS
442	198	39	200	193.3	758251	PASS
443	442	15	24	19.3	146240	PASS

OP-1213.M Mon Dec 18 09:39:22 2023

File :T:\Data1\MSD4\2023\DEC\17\00101015.D  
Operator : MAH  
Acquired : 18 Dec 2023 12:00 am using AcqMethod SVOCT1.M  
Instrument : MSD4  
Sample Name: SYS  
Misc Info :  
Vial Number: 1



Peak #	Ret. Time	Type	Width	Area	Start Time	End Time
1	11.272	VV	0.019	25577256	11.225	11.478
2	11.881	VV	0.016	43863045	11.828	11.948
3	13.196	VV	0.022	60384414	13.161	13.295
4	13.409	M	0.016	422559	13.390	13.428
5	13.826	VV	0.018	2830659	13.783	13.850
6	14.189	VV	0.016	44826274	14.142	14.228
7	14.732	VV	0.024	57510186	14.660	14.963

ODE  
ODD  
ODT

<b>Internal Standard ICal Average Responses</b>	<b>BNA-1217</b>
	(method)

	<b>1,4 Dichlorobenzene-d4</b>	<b>Naphthalene-d8</b>	<b>Acenaphthene-d10</b>	<b>Phenanthrene-d10</b>	<b>Chrysene-d12</b>	<b>Perylene-d12</b>
<b>20</b>	36311870.1	30873949.95	49024644.03	80457375.85	55805810.81	59509331.81
<b>15</b>	39326243.4	86798741.45	51316994.92	84765898.96	57206141.75	57531882.21
<b>10</b>	38582095.1	85080659.13	51954444.22	88711206.6	69630556.23	75643988.66
<b>7.5</b>	40178505.55	90400539.84	54873742.85	92887406.83	66966330.62	64653762.52
<b>5</b>	40459342.16	90072177.65	54480662.99	92056826.36	69144010.55	66734667.79
<b>2.5</b>	30790445.14	68870079.28	40920655.54	69076176.63	47221652.68	42928555.38
<b>0.5</b>	40818254.7	90400685.74	53672002.58	91640958.53	68043127.25	65299192.91
<b>Average</b>	38066679	84642405	50891878	85656550	62002519	62132008

<b>50%</b>	<b>19033340</b>	<b>42321202</b>	<b>25445939</b>	<b>42828275</b>	<b>31001259</b>	<b>31066004</b>
<b>150%</b>	<b>57100019</b>	<b>126963607</b>	<b>76337817</b>	<b>128484825</b>	<b>93003778</b>	<b>93198012</b>

Analyst: BMM

Response Factor Report MSD4

Method Path : T:\Data1\MSD4\METHODS\2023\  
 Method File : BNA-1217.M  
 Title : EPA 8270D / EPA 625.1 - MSD4  
 Last Update : Mon Dec 18 10:44:19 2023  
 Response Via : Initial Calibration

Calibration Files

20 =00201002.D 15 =00301003.D 10 =00401031.D 7.5 =00501005.D 5 =00601006.D 2.5 =00

Compound	20	15	10	7.5	5	2.5	0.5	Avg	%RSD
1) I 1,4-Dichlorobenzen...	-----ISTD-----								
2) Nitrosodimethy...	0.509	0.518	0.458	0.541	0.558	0.555	0.584	0.532	7.74
3) S 2-Fluorophenol	0.769	0.771	0.773	0.779	0.785	0.829	0.802	0.787	2.79
4) S Phenol-d5	0.922	0.936	0.911	0.956	0.951	1.023	0.976	0.954	3.91
5) Pyridine	0.693	0.728	0.613	0.745	0.749	0.787	0.854	0.738	10.13
6) Aniline	0.781	0.829	0.637	0.947	0.983	0.901	1.095	0.882	16.88
7) Phenol	0.936	0.954	0.950	1.034	1.118	1.074	1.248	1.045	10.82
8) bis(2-Chloroet...	0.485	0.500	0.477	0.548	0.581	0.611	0.672	0.553	13.08
9) 2-Chlorophenol	0.871	0.909	0.919	0.979	1.052	1.010	1.230	0.996	12.15
10) 1,3-Dichlorobe...	0.886	0.931	0.969	1.027	1.099	1.055	1.304	1.039	13.27
11) 1,4-Dichlorobe...	0.895	0.945	0.987	1.044	1.125	1.093	1.352	1.063	14.19
12) Benzyl alcohol	0.544	0.604	0.577	0.636	0.681	0.748	0.712	0.643	11.52
13) 1,2-Dichlorobe...	0.832	0.883	0.938	0.992	1.073	1.040	1.273	1.005	14.48
14) 2-Methylphenol	0.646	0.669	0.680	0.729	0.758	0.730	0.890	0.729	11.14
15) bis(2-chloro-1...	0.315	0.323	0.324	0.343	0.366	0.359	0.426	0.351	10.91
16) 3+4-Methylphenol	0.744	0.786	0.800	0.870	0.939	0.913	1.065	0.874	12.56
17) n-Nitroso-di-n...	0.537	0.549	0.533	0.604	0.645	0.683	0.774	0.618	14.53
18) Hexachloroethane	0.332	0.345	0.349	0.373	0.397	0.395	0.454	0.378	11.08
19) I Naphthalene-d8	-----ISTD-----								
20) S Nitrobenzene-d5	0.409	0.424	0.398	0.421	0.424	0.442	0.428	0.421	3.39
21) Nitrobenzene	0.355	0.368	0.360	0.391	0.426	0.442	0.561	0.415	17.52
22) Isophorone	0.713	0.726	0.719	0.765	0.828	0.848	0.993	0.799	12.65
23) 2-Nitrophenol	0.220	0.226	0.221	0.231	0.243	0.253	0.290	0.240	10.27
24) 2,4-Dimethylph...	0.286	0.288	0.269	0.276	0.283	0.255	0.273	0.276	4.14
25) bis(2-Chloroet...	0.429	0.442	0.445	0.475	0.521	0.528	0.608	0.493	13.04
26) Benzoic acid	0.138	0.129	0.102	0.112	0.098	0.082	0.034	0.099	34.59
27) 2,4-Dichloroph...	0.320	0.329	0.333	0.344	0.368	0.334	0.402	0.347	8.25
28) 1,2,4-Trichlor...	0.342	0.354	0.374	0.380	0.415	0.385	0.492	0.392	12.72
29) Naphthalene	1.013	1.074	1.144	1.210	1.338	1.319	1.656	1.251	17.19
30) alpha-Terpineol	0.176	0.184	0.185	0.201	0.213	0.210	0.250	0.203	12.36
31) 4-Chloroaniline	0.161	0.177	0.169	0.301	0.344	0.255	0.448	0.265	40.42
32) Hexachlorobuta...	0.194	0.197	0.207	0.210	0.228	0.211	0.270	0.217	11.90
33) 4-Chloro-3-met...	0.316	0.322	0.321	0.335	0.356	0.341	0.385	0.340	7.18
34) 2-Methylnaphtha...	0.692	0.714	0.766	0.797	0.870	0.839	1.050	0.818	14.71
35) 1-Methylnaphth...	0.672	0.700	0.750	0.774	0.848	0.818	1.031	0.799	14.95
36) Acenaphthene-d10	-----ISTD-----								
37) Hexachlorocycl...	0.239	0.262	0.256	0.267	0.275	0.211	0.266	0.254	8.65
38) 2,4,6-Trichlor...	0.399	0.412	0.409	0.418	0.447	0.393	0.482	0.423	7.45
39) 2,4,5-Trichlor...	0.410	0.428	0.435	0.440	0.471	0.423	0.512	0.446	7.80
40) S 2-Fluorobiphenyl	1.231	1.242	1.207	1.192	1.194	1.202	1.220	1.212	1.58
41) 2-Chloronaphth...	0.416	0.433	0.440	0.457	0.493	0.489	0.606	0.476	13.40
42) 2-Nitroaniline	0.281	0.289	0.284	0.311	0.332	0.335	0.351	0.312	9.01
43) 1,4-Dinitroben...	0.216	0.224	0.212	0.222	0.230	0.192	0.189	0.212	7.55
44) Dimethyl phtha...	1.279	1.327	1.372	1.397	1.529	1.460	1.853	1.460	13.17
45) 2,6-Dinitrotol...	0.336	0.347	0.349	0.354	0.378	0.342	0.409	0.359	7.19
46) Acenaphthylene	1.709	1.791	1.873	1.941	2.147	2.107	2.462	2.004	12.79
47) 1,3-Dinitroben...	0.247	0.255	0.250	0.260	0.271	0.236	0.260	0.254	4.38
48) 1,2-Dinitroben...	0.165	0.173	0.169	0.174	0.187	0.165	0.191	0.175	5.86
49) 3-Nitroaniline						0.174	0.276	0.225	32.16
50) Acenaphthene	1.092	1.148	1.209	1.248	1.372	1.347	1.719	1.305	15.95
51) 2,4-Dinitrophenol	0.154	0.150	0.131	0.132	0.120	0.045	0.052	0.112	39.94
52) 4-Nitrophenol	0.184	0.186	0.165	0.180	0.178	0.169	0.103	0.166	17.46

63)	2,4-Dinitrotol...	0.398	0.414	0.424	0.437	0.470	0.417	0.474	0.433	6.63
64)	Dibenzofuran	1.509	1.588	1.685	1.745	1.913	1.874	2.399	1.816	16.22
65)	2,3,5,6-tetrac...	0.351	0.356	0.363	0.364	0.384	0.307	0.360	0.355	6.64
66)	2,3,4,6-Tetrac...	0.356	0.363	0.373	0.373	0.397	0.333	0.407	0.372	6.66
67)	Diethyl phthalate	1.196	1.237	1.294	1.337	1.445	1.402	1.723	1.377	12.77
68)	Fluorene	1.191	1.264	1.367	1.432	1.567	1.526	1.921	1.467	16.42
69)	4-Chlorophenyl...	0.622	0.657	0.707	0.727	0.790	0.735	0.966	0.743	15.11
60)	4-Nitroaniline	0.216	0.195	0.242	0.260	0.301	0.248	0.319	0.254	17.31

61)	I	Phenanthrene-d10	-----ISTD-----								
62)		4,6-Dinitro-2-...	0.133	0.131	0.123	0.121	0.118	0.061	0.064	0.107	29.09
63)		n-Nitrosodiphe...	0.559	0.598	0.654	0.704	0.787	0.754	0.947	0.715	18.27
64)		1,2-Diphenyl h...	0.722	0.758	0.673	0.728	0.794	0.834	0.917	0.775	10.50
65)	S	2,4,6-Tribromo...	0.152	0.148	0.144	0.143	0.141	0.138	0.144	0.144	3.03
66)		4-Bromophenyl-...	0.251	0.259	0.265	0.266	0.287	0.257	0.329	0.273	9.79
67)		Hexachlorobenzene	0.288	0.296	0.311	0.307	0.332	0.296	0.403	0.319	12.42
68)		Pentachlorophenol	0.163	0.162	0.162	0.154	0.157	0.108	0.107	0.145	17.80
69)		Phenanthrene	1.047	1.079	1.143	1.182	1.307	1.247	1.619	1.232	15.67
70)		Anthracene	1.056	1.099	1.159	1.212	1.321	1.241	1.543	1.233	13.19
71)		Carbazole	0.418	0.470	0.818	0.599	0.727	0.823	1.273	0.733	39.12
72)		Di-n-butyl pht...	1.125	1.170	1.234	1.290	1.414	1.362	1.571	1.309	11.74
73)		Fluoranthene	1.039	1.071	1.200	1.198	1.318	1.194	1.472	1.213	12.09
74)		Benzidine	0.026	0.033	0.073	0.077	0.090	0.074	0.132	0.072	49.41
75)		Bis(2-ethylhex...	0.433	0.446	0.476	0.482	0.524	0.477	0.640	0.497	13.96

76)	I	Chrysene-d12	-----ISTD-----								
77)		Pyrene	1.486	1.604	1.553	1.689	1.783	1.778	2.099	1.713	11.85
78)	S	Terphenyl-d14	1.050	1.075	0.957	1.004	0.976	1.035	0.995	1.013	4.15
79)		Butyl benzyl p...	0.644	0.684	0.652	0.695	0.727	0.722	0.739	0.695	5.34
80)		Benzo[a] anthra...	1.297	1.302	1.350	1.363	1.466	1.371	1.760	1.415	11.45
81)		3,3'-Dichlorob...	0.180	0.192	0.195	0.233	0.250	0.287	0.483	0.260	40.53
82)		Chrysene	1.107	1.181	1.253	1.257	1.379	1.311	1.622	1.301	12.76
83)		Bis(2-ethylhex...	0.875	0.930	0.910	0.967	1.028	1.015	1.066	0.970	7.14

84)	I	Perylene-d12	-----ISTD-----								
85)		Di-n-octyl pht...	1.325	1.433	1.322	1.505	1.565	1.528	1.372	1.436	6.93
86)		Benzo[b] fluora...	1.229	1.142	1.164	1.187	1.245	1.054	1.267	1.184	6.14
87)		Benzo[k] fluora...	1.083	1.137	1.198	1.211	1.297	1.202	1.457	1.226	9.90
88)		Benzo[a]pyrene	0.967	0.980	0.978	0.958	1.011	0.899	1.100	0.985	6.21
89)		Indeno[1,2,3-c...	1.103	1.077	1.202	1.030	1.083	0.885	1.089	1.067	8.97
90)		Dibenz[a,h]ant...	0.901	0.889	0.990	0.847	0.891	0.721	0.893	0.876	9.20
91)		Benzo[ghi]pery...	0.824	0.849	0.966	0.811	0.863	0.716	0.926	0.851	9.56

(#) = Out of Range

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 00901009.D  
 Acq On : 17 Dec 2023 9:17 pm  
 Operator : MAH  
 Sample : ICV BNA 5 PPM  
 Misc :  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Dec 18 11:16:39 2023  
 Quant Method : T:\Data1\MSD4\METHODS\2023\BNA-1217.M  
 Quant Title : EPA 8270D / EPA 625.1 - MSD4  
 QLast Update : Mon Dec 18 10:44:19 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
<b>Internal Standards</b>						
1) 1,4-Dichlorobenzene-d4	6.075	150	38038126	20.00	ug/mL	0.00
19) Naphthalene-d8	7.573	136	84137341	20.00	ug/mL	0.00
36) Acenaphthene-d10	9.702	164	49738781	20.00	ug/mL	0.00
61) Phenanthrene-d10	11.519	188	83282433	20.00	ug/mL	0.00
76) Chrysene-d12	14.755	240	61822086	20.00	ug/mL	0.00
84) Perylene-d12	16.381	264	60971304	20.00	ug/mL	0.00
<b>System Monitoring Compounds</b>						
3) 2-Fluorophenol	4.607	112	76197349m	50.91	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	101.82%	
4) Phenol-d5	5.675	99	92195031	50.83	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	101.66%	
20) Nitrobenzene-d5	6.736	82	43080312	24.33	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	97.32%	
40) 2-Fluorobiphenyl	8.889	172	74518812	24.71	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	98.84%	
65) 2,4,6-Tribromophenol	10.671	332	30483429	50.71	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	101.42%	
78) Terphenyl-d14	13.489	244	74959143	23.94	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	95.76%	
<b>Target Compounds</b>						
2) Nitrosodimethylamine	3.055	74	4916489	4.86	ug/mL	100
5) Pyridine	3.080	79	6604280m	4.70	ug/mL	
6) Aniline	5.718	93	8853020	5.28	ug/mL	100
7) Phenol	5.688	94	10253473	5.16	ug/mL#	70
8) bis(2-Chloroethyl)ether	5.797	63	5119356	4.86	ug/mL	95
9) 2-Chlorophenol	5.829	128	9524695	5.03	ug/mL	96
10) 1,3-Dichlorobenzene	6.002	146	10043208	5.08	ug/mL	94
11) 1,4-Dichlorobenzene	6.092	146	10308602m	5.10	ug/mL	
12) Benzyl alcohol	6.249	79	6195137	5.07	ug/mL	98
13) 1,2-Dichlorobenzene	6.262	146	9849331	5.16	ug/mL	100
14) 2-Methylphenol	6.371	107	6785665	4.90	ug/mL	98
15) bis(2-chloro-1-methyle...	6.397	121	3421111	5.12	ug/mL	100
16) 3+4-Methylphenol	6.558	108	8492534	5.11	ug/mL	100
17) n-Nitroso-di-n-propyla...	6.562	70	5809561	4.94	ug/mL	97
18) Hexachloroethane	6.649	117	3613038	5.02	ug/mL	96
21) Nitrobenzene	6.755	77	8450464	4.84	ug/mL	97
22) Isophorone	7.035	82	16488009	4.90	ug/mL	96
23) 2-Nitrophenol	7.123	139	4815097	4.76	ug/mL	96
24) 2,4-Dimethylphenol	7.179	107	4978043	4.29	ug/mL	91
25) bis(2-Chloroethoxy)met...	7.304	93	10404244	5.02	ug/mL#	97
26) Benzoic acid (10 ug/mL)	7.290	105	3930547	9.88	ug/mL#	80
27) 2,4-Dichlorophenol BHM 12/19/23	7.404	162	7373173	5.05	ug/mL	98
28) 1,2,4-Trichlorobenzene	7.501	180	8434495	5.12	ug/mL	99
29) Naphthalene	7.596	128	27076992	5.15	ug/mL	99
30) alpha-Terpineol	7.617	93	4447759	5.22	ug/mL	98
31) 4-Chloroaniline	7.679	127	7003271m	6.28	ug/mL	
32) Hexachlorobutadiene	7.735	225	4624117	5.07	ug/mL	99
33) 4-Chloro-3-methylphenol	8.261	107	7115635	4.98	ug/mL	96
34) 2-Methylnaphthalene	8.431	142	17925199	5.21	ug/mL	95

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 00901009.D  
 Acq On : 17 Dec 2023 9:17 pm  
 Operator : MAH  
 Sample : ICV BNA 5 PPM  
 Misc :  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Dec 18 11:16:39 2023  
 Quant Method : T:\Data1\MSD4\METHODS\2023\BNA-1217.M  
 Quant Title : EPA 8270D / EPA 625.1 - MSD4  
 QLast Update : Mon Dec 18 10:44:19 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
35) 1-Methylnaphthalene	8.549	142	16678280	4.96	ug/mL	95
37) Hexachlorocyclopentadiene	8.608	237	2750748	4.36	ug/mL	99
38) 2,4,6-Trichlorophenol	8.775	196	5391008	5.13	ug/mL	100
39) 2,4,5-Trichlorophenol	8.815	196	5693150	5.14	ug/mL	99
41) 2-Chloronaphthalene	9.023	127	5963972	5.04	ug/mL	97
42) 2-Nitroaniline	9.165	65	3999921	5.16	ug/mL	85
43) 1,4-Dinitrobenzene	9.354	168	2662564	5.05	ug/mL	96
44) Dimethyl phthalate	9.399	163	18554313	5.11	ug/mL	100
45) 2,6-Dinitrotoluene	9.473	165	4537283	5.08	ug/mL	89
46) Acenaphthylene	9.526	152	24999064	5.01	ug/mL	99
47) 1,3-Dinitrobenzene	9.436	168	3219786	5.10	ug/mL	94
48) 1,2-Dinitrobenzene	9.532	168	2159216	4.97	ug/mL	94
49) 3-Nitroaniline	9.671	65	2758731m	4.93	ug/mL	
50) Acenaphthene	9.738	153	16497287	5.08	ug/mL	99
51) 2,4-Dinitrophenol	9.797	184	1306274	4.80	ug/mL#	85
52) 4-Nitrophenol	9.883	65	2030724	4.80	ug/mL	96
53) 2,4-Dinitrotoluene	9.955	165	5641068	5.23	ug/mL	95
54) Dibenzofuran	9.949	168	23098304	5.11	ug/mL	96
55) 2,3,5,6-tetrachlorophenol	10.045	232	4612024m	5.22	ug/mL	
56) 2,3,4,6-Tetrachlorophenol	10.097	232	4662637	5.04	ug/mL	93
57) Diethyl phthalate	10.260	149	17356723	5.07	ug/mL	99
58) Fluorene	10.368	166	18751489	5.14	ug/mL	99
59) 4-Chlorophenyl-phenyle...	10.382	204	9625949	5.21	ug/mL	97
60) 4-Nitroaniline	10.419	138	3940290m	6.23	ug/mL	
62) 4,6-Dinitro-2-methylph...	10.442	198	2408674	5.31	ug/mL#	87
63) n-Nitrosodiphenylamine	10.535	169	16066182	5.40	ug/mL	99
64) 1,2-Diphenyl hydrazine	10.577	77	16067179	4.98	ug/mL	96
66) 4-Bromophenyl-phenylether	10.980	248	5863272	5.15	ug/mL	93
67) Hexachlorobenzene	11.019	284	6803066	5.12	ug/mL	92
68) Pentachlorophenol	11.275	266	3245736	5.26	ug/mL	99
69) Phenanthrene	11.545	178	26055332	5.08	ug/mL	98
70) Anthracene	11.606	178	26369330	5.14	ug/mL	98
71) Carbazole	11.818	167	16371343	5.37	ug/mL#	88
72) Di-n-butyl phthalate	12.265	149	28162170	5.17	ug/mL	98
73) Fluoranthene	12.995	202	25903749	5.13	ug/mL	97
74) Benzidine (100ug/L) 2/19/23	13.195	184	4068025	13.57	ug/mL	98
75) Bis(2-ethylhexyl)adipate	14.200	129	10138584	4.90	ug/mL	98
77) Pyrene	13.271	202	26532217	5.01	ug/mL	97
79) Butyl benzyl phthalate	14.102	149	10704178	4.98	ug/mL	92
80) Benzo[a]anthracene	14.739	228	21857005	5.00	ug/mL	97
81) 3,3'-Dichlorobenzidine (100ug/L)	14.734	252	7820015	9.73	ug/mL#	97
82) Chrysene	14.783	228	21188006	5.27	ug/mL#	91
83) Bis(2-ethylhexyl)phtha...	14.801	149	14872015	4.96	ug/mL	99
85) Di-n-octyl phthalate	15.561	149	21535895	4.92	ug/mL#	95
86) Benzo[b]fluoranthene	15.961	252	17979033	4.98	ug/mL	95
87) Benzo[k]fluoranthene	15.991	252	20005979	5.35	ug/mL	100
88) Benzo[a]pyrene	16.311	252	15703552	5.23	ug/mL	98
89) Indeno[1,2,3-cd]pyrene	17.661	276	16756226	5.15	ug/mL	100
90) Dibenz[a,h]anthracene	17.692	278	13536485	5.07	ug/mL	100
91) Benzo[ghi]perylene	18.036	276	13031952	5.02	ug/mL	100

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 01101010.D  
 Acq On : 17 Dec 2023 9:44 pm  
 Operator : MAH  
 Sample : BDR0169-BS1  
 Misc : *BOL SUM R/A/13*  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Dec 18 15:29:28 2023  
 Quant Method : T:\Data1\MSD4\METHODS\2023\BNA-1217.M  
 Quant Title : EPA 8270D / EPA 625.1 - MSD4  
 QLast Update : Mon Dec 18 10:44:19 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	6.075	150	33968353	20.00	ug/mL	0.00
19) Naphthalene-d8	7.572	136	74690369	20.00	ug/mL	0.00
36) Acenaphthene-d10	9.700	164	43746972	20.00	ug/mL	0.00
61) Phenanthrene-d10	11.516	188	74594823	20.00	ug/mL	0.00
76) Chrysene-d12	14.753	240	57907089	20.00	ug/mL	0.00
84) Perylene-d12	16.379	264	57792956	20.00	ug/mL	0.00
System Monitoring Compounds						
3) 2-Fluorophenol	4.606	112	51105796m	38.24	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	76.48%	
4) Phenol-d5	5.669	99	65193900	40.25	ug/mL	-0.01
Spiked Amount	50.000		Recovery	=	80.50%	
20) Nitrobenzene-d5	6.732	82	27184222	17.30	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	69.20%	
40) 2-Fluorobiphenyl	8.887	172	52170634	19.67	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	78.68%	
65) 2,4,6-Tribromophenol	10.667	332	23065317	42.83	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	85.66%	
78) Terphenyl-d14	13.487	244	58932847	20.10	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	80.40%	
Target Compounds						
2) Nitrosodimethylamine	3.061	74	3510040m	3.89	ug/mL	
5) Pyridine	3.080	79	3675885m	2.93	ug/mL	
6) Aniline	5.715	93	4924690	3.29	ug/mL	98
7) Phenol	5.683	94	7891397	4.45	ug/mL#	75
8) bis(2-Chloroethyl)ether	5.794	63	3567192	3.80	ug/mL	92
9) 2-Chlorophenol	5.829	128	6721343	3.97	ug/mL	98
10) 1,3-Dichlorobenzene	6.002	146	6906292	3.92	ug/mL	94
11) 1,4-Dichlorobenzene	6.092	146	7119386m	3.94	ug/mL	
12) Benzyl alcohol	6.248	79	4532733	4.15	ug/mL	98
13) 1,2-Dichlorobenzene	6.261	146	6829325	4.00	ug/mL	99
14) 2-Methylphenol	6.371	107	5124206	4.14	ug/mL	100
15) bis(2-chloro-1-methyle...	6.404	121	2336725	3.92	ug/mL	99
16) 3+4-Methylphenol	6.556	108	6458707	4.35	ug/mL	99
17) n Nitroso-di-n-propyla...	6.559	70	4289181	4.09	ug/mL	98
18) Hexachloroethane	6.649	117	2480751	3.86	ug/mL	96
21) Nitrobenzene	6.752	77	6050048	3.91	ug/mL	96
22) Isophorone	7.034	82	12650919	4.24	ug/mL	96
23) 2-Nitrophenol	7.120	139	3528588m	3.93	ug/mL	
24) 2,4-Dimethylphenol	7.178	107	6175897	5.99	ug/mL	91
25) bis(2-Chloroethoxy)met...	7.304	93	7738965	4.21	ug/mL#	97
26) Benzoic acid	7.278	105	3019526	8.71	ug/mL#	84
27) 2,4-Dichlorophenol	7.403	162	5519571	4.26	ug/mL	99
28) 1,2,4-Trichlorobenzene	7.500	180	5885069	4.02	ug/mL	99
29) Naphthalene	7.595	128	19488410	4.17	ug/mL	99
31) 4-Chloroaniline	7.685	127	3889237	3.93	ug/mL	90
32) Hexachlorobutadiene	7.734	225	3314343	4.10	ug/mL	100
33) 4-Chloro-3-methylphenol	8.260	107	5546350	4.37	ug/mL	95
34) 2-Methylnaphthalene	8.430	142	13249430	4.33	ug/mL	95
35) 1-Methylnaphthalene	8.549	142	12817171	4.29	ug/mL	95

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 01101010.D  
 Acq On : 17 Dec 2023 9:44 pm  
 Operator : MAH  
 Sample : BDK0169-BS1  
 Misc :  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Dec 18 15:29:28 2023  
 Quant Method : T:\Data1\MSD4\METHODS\2023\BNA-1217.M  
 Quant Title : EPA 8270D / EPA 625.1 - MSD4  
 QLast Update : Mon Dec 18 10:44:19 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) Hexachlorocyclopentadiene	8.607	237	3165217	5.70	ug/mL	99
38) 2,4,6-Trichlorophenol	8.774	196	4142098	4.48	ug/mL	100
39) 2,4,5-Trichlorophenol	8.815	196	4389506	4.50	ug/mL	99
41) 2-Chloronaphthalene	9.021	127	4475543	4.30	ug/mL	96
42) 2-Nitroaniline	9.164	65	3085225	4.52	ug/mL	87
43) 1,4-Dinitrobenzene	9.353	168	2067119	4.45	ug/mL	96
44) Dimethyl phthalate	9.397	163	14650850	4.59	ug/mL	100
45) 2,6-Dinitrotoluene	9.471	165	3546032	4.51	ug/mL	89
46) Acenaphthylene	9.524	152	19201037	4.38	ug/mL	99
47) 1,3-Dinitrobenzene	9.434	168	2527060	4.55	ug/mL	92
48) 1,2-Dinitrobenzene	9.530	168	1752261	4.59	ug/mL#	92
49) 3-Nitroaniline	9.671	65	1610670m	3.27	ug/mL	
50) Acenaphthene	9.737	153	12998654	4.55	ug/mL	99
51) 2,4-Dinitrophenol	9.797	184	1026682	4.35	ug/mL#	86
52) 4-Nitrophenol	9.882	65	1607205	4.33	ug/mL	96
53) 2,4-Dinitrotoluene	9.953	165	4445807	4.69	ug/mL	96
54) Dibenzofuran	9.949	168	18053512	4.54	ug/mL	96
55) 2,3,5,6-tetrachlorophenol	10.044	232	3504875	4.51	ug/mL#	79
56) 2,3,4,6-Tetrachlorophenol	10.097	232	3710382	4.56	ug/mL	93
57) Diethyl phthalate	10.258	149	14073634	4.67	ug/mL	99
58) Fluorene	10.367	166	14988795	4.67	ug/mL	100
59) 4-Chlorophenyl-phenyle...	10.382	204	7568316	4.65	ug/mL	97
60) 4-Nitroaniline	10.418	138	2498401m	4.49	ug/mL	
62) 4,6-Dinitro-2-methylph...	10.441	198	1871334	4.66	ug/mL	87
63) n-Nitrosodiphenylamine	10.533	169	12585103	4.72	ug/mL	99
64) 1,2-Diphenyl hydrazine	10.575	77	12604309	4.36	ug/mL	96
66) 4-Bromophenyl-phenylether	10.979	248	4659643	4.57	ug/mL	93
67) Hexachlorobenzene	11.018	284	5455841	4.58	ug/mL	92
68) Pentachlorophenol	11.274	266	2300133	4.19	ug/mL	100
69) Phenanthrene	11.543	178	21409214	4.66	ug/mL	98
70) Anthracene	11.603	178	21683271	4.72	ug/mL	98
71) Carbazole	11.816	167	14852783	5.43	ug/mL#	88
72) Di-n-butyl phthalate	12.263	149	23843478	4.88	ug/mL	98
73) Fluoranthene	12.994	202	22312133	4.93	ug/mL	97
74) Benzidine	13.186	184	143828m	0.54	ug/mL	
75) Bis(2-ethylhexyl)adipate	14.199	129	8623110	4.65	ug/mL	98
77) Pyrene	13.270	202	22641545	4.56	ug/mL	97
79) Butyl benzyl phthalate	14.101	149	9169951	4.56	ug/mL	92
80) Benzo[a]anthracene	14.736	228	19306314m	4.71	ug/mL	
81) 3,3'-Dichlorobenzidine	14.732	252	9851582	13.09	ug/mL	98
82) Chrysene	14.777	228	18867604m	5.01	ug/mL	
83) Bis(2-ethylhexyl)phtha...	14.800	149	12937582	4.61	ug/mL	100
85) Di-n-octyl phthalate	15.561	149	18855023	4.55	ug/mL#	95
86) Benzo[b]fluoranthene	15.958	252	17520293m	5.12	ug/mL	
87) Benzo[k]fluoranthene	15.986	252	18784365m	5.30	ug/mL	
88) Benzo[a]pyrene	16.309	252	14019413m	4.93	ug/mL	
89) Indeno[1,2,3-cd]pyrene	17.661	276	15355524	4.98	ug/mL	100
90) Dibenz[a,h]anthracene	17.690	278	13098111	5.17	ug/mL	100
91) Benzo[ghi]perylene	18.034	276	13018514	5.30	ug/mL	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 01201011.D  
 Acq On : 17 Dec 2023 10:10 pm  
 Operator : MAH  
 Sample : ~~DDK0169~~-BSD1  
 Misc : *BR BMM 12/18/23*  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Dec 18 15:32:19 2023  
 Quant Method : T:\Data1\MSD4\METHODS\2023\BNA-1217.M  
 Quant Title : EPA 8270D / EPA 625.1 - MSD4  
 QLast Update : Mon Dec 18 10:44:19 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	6.076	150	36871430	20.00	ug/mL	0.00
19) Naphthalene-d8	7.572	136	80671023	20.00	ug/mL	0.00
36) Acenaphthene-d10	9.701	164	47347763	20.00	ug/mL	0.00
61) Phenanthrene-d10	11.519	188	80368218	20.00	ug/mL	0.00
76) Chrysene-d12	14.754	240	60113426	20.00	ug/mL	0.00
84) Perylene-d12	16.379	264	59514058	20.00	ug/mL	0.00
System Monitoring Compounds						
3) 2-Fluorophenol	4.607	112	55486569m	38.25	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	76.50%	
4) Phenol-d5	5.671	99	71932823	40.92	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	81.84%	
20) Nitrobenzene-d5	6.733	82	31821344	18.75	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	75.00%	
40) 2-Fluorobiphenyl	8.889	172	58996517	20.55	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	82.20%	
65) 2,4,6-Tribromophenol	10.669	332	25744399	44.38	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	88.76%	
78) Terphenyl-d14	13.488	244	64850036	21.30	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	85.20%	
Target Compounds						
2) Nitrosodimethylamine	3.057	74	4098924m	4.18	ug/mL	Qvalue
5) Pyridine	3.080	79	4589531m	3.37	ug/mL	
6) Aniline	5.716	93	6139039	3.78	ug/mL	100
7) Phenol	5.684	94	8869981	4.61	ug/mL#	75
8) bis(2-Chloroethyl)ether	5.795	63	4146028	4.06	ug/mL	94
9) 2-Chlorophenol	5.829	128	7671202	4.18	ug/mL	98
10) 1,3-Dichlorobenzene	6.002	146	7979281	4.17	ug/mL	94
11) 1,4-Dichlorobenzene	6.092	146	8142369m	4.16	ug/mL	
12) Benzyl alcohol	6.249	79	5207424	4.39	ug/mL	98
13) 1,2-Dichlorobenzene	6.262	146	7833636	4.23	ug/mL	100
14) 2-Methylphenol	6.371	107	5953545	4.43	ug/mL	98
15) bis(2-chloro-1-methyle...	6.405	121	2698164	4.17	ug/mL	100
16) 3+4-Methylphenol	6.557	108	7322879	4.55	ug/mL	99
17) n-Nitroso-di-n-propyla...	6.561	70	4913984	4.31	ug/mL	98
18) Hexachloroethane	6.649	117	2885796	4.14	ug/mL	97
21) Nitrobenzene	6.754	77	6906836	4.13	ug/mL	96
22) Isophorone	7.035	82	14351489	4.45	ug/mL	96
23) 2-Nitrophenol	7.121	139	3999340m	4.12	ug/mL	
24) 2,4-Dimethylphenol	7.180	107	6998187	6.29	ug/mL	91
25) bis(2-Chloroethoxy)met...	7.304	93	8813156	4.44	ug/mL#	97
26) Benzoic acid	7.282	105	3372620m	8.97	ug/mL	
27) 2,4-Dichlorophenol	7.404	162	6239806	4.46	ug/mL	99
28) 1,2,4-Trichlorobenzene	7.501	180	6767066	4.28	ug/mL	99
29) Naphthalene	7.596	128	22118315	4.38	ug/mL	99
31) 4-Chloroaniline	7.682	127	4763900	4.46	ug/mL	92
32) Hexachlorobutadiene	7.735	225	3799561	4.35	ug/mL	99
33) 4-Chloro-3-methylphenol	8.261	107	6322742	4.62	ug/mL	95
34) 2-Methylnaphthalene	8.431	142	14892928	4.51	ug/mL	95
35) 1-Methylnaphthalene	8.549	142	14262516	4.42	ug/mL	95

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 01201011.D  
 Acq On : 17 Dec 2023 10:10 pm  
 Operator : MAH  
 Sample : BDK0169-BSD1  
 Misc :  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Dec 18 15:32:19 2023  
 Quant Method : T:\Data1\MSD4\METHODS\2023\BNA-1217.M  
 Quant Title : EPA 8270D / EPA 625.1 - MSD4  
 QLast Update : Mon Dec 18 10:44:19 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) Hexachlorocyclopentadiene	8.608	237	3619863	6.03	ug/mL	99
38) 2,4,6-Trichlorophenol	8.774	196	4704946	4.70	ug/mL	100
39) 2,4,5-Trichlorophenol	8.815	196	4951163	4.69	ug/mL	99
41) 2-Chloronaphthalene	9.022	127	5029812	4.46	ug/mL	96
42) 2-Nitroaniline	9.165	65	3517290	4.76	ug/mL	86
43) 1,4-Dinitrobenzene	9.354	168	2381253	4.74	ug/mL	95
44) Dimethyl phthalate	9.399	163	16405779	4.75	ug/mL	100
45) 2,6-Dinitrotoluene	9.472	165	4039320	4.75	ug/mL	89
46) Acenaphthylene	9.525	152	21554998	4.54	ug/mL	98
47) 1,3-Dinitrobenzene	9.436	168	2893095	4.81	ug/mL	90
48) 1,2-Dinitrobenzene	9.531	168	1994235	4.83	ug/mL	92
49) 3-Nitroaniline	9.672	65	1772243	3.33	ug/mL#	76
50) Acenaphthene	9.738	153	14564004	4.71	ug/mL	99
51) 2,4-Dinitrophenol	9.797	184	1188554	4.61	ug/mL#	85
52) 4-Nitrophenol	9.883	65	1825288	4.54	ug/mL	96
53) 2,4-Dinitrotoluene	9.955	165	5015911	4.89	ug/mL	95
54) Dibenzofuran	9.949	168	20214940	4.70	ug/mL	96
55) 2,3,5,6-tetrachlorophenol	10.045	232	4045458m	4.81	ug/mL	
56) 2,3,4,6-Tetrachlorophenol	10.097	232	4163456	4.73	ug/mL	93
57) Diethyl phthalate	10.259	149	15670679	4.81	ug/mL	99
58) Fluorene	10.368	166	16638606	4.79	ug/mL	99
59) 4-Chlorophenyl-phenyle...	10.382	204	8480945	4.82	ug/mL	97
60) 4-Nitroaniline	10.419	138	2686847m	4.46	ug/mL	
62) 4,6-Dinitro-2-methylph...	10.442	198	2109312	4.86	ug/mL	87
63) n-Nitrosodiphenylamine	10.534	169	14344073	5.00	ug/mL	98
64) 1,2-Diphenyl hydrazine	10.577	77	14062565	4.51	ug/mL	96
66) 4-Bromophenyl-phenylether	10.980	248	5260042	4.79	ug/mL	94
67) Hexachlorobenzene	11.019	284	6088402	4.75	ug/mL	92
68) Pentachlorophenol	11.275	266	2607407	4.41	ug/mL	99
69) Phenanthrene	11.544	178	23869787	4.82	ug/mL	98
70) Anthracene	11.605	178	24145052	4.87	ug/mL	98
71) Carbazole	11.818	167	16891319	5.74	ug/mL#	88
72) Di-n-butyl phthalate	12.264	149	26111871	4.96	ug/mL	98
73) Fluoranthene	12.994	202	24038953	4.93	ug/mL	97
75) Bis(2-ethylhexyl)adipate	14.200	129	9172286	4.59	ug/mL	98
77) Pyrene	13.270	202	24310973	4.72	ug/mL	97
79) Butyl benzyl phthalate	14.102	149	9683623	4.64	ug/mL	92
80) Benzo[a]anthracene	14.737	228	20349742	4.78	ug/mL	97
81) 3,3'-Dichlorobenzidine	14.732	252	10432014	13.35	ug/mL	98
82) Chrysene	14.782	228	19896388	5.09	ug/mL#	90
83) Bis(2-ethylhexyl)phtha...	14.800	149	13513821	4.63	ug/mL	99
85) Di-n-octyl phthalate	15.561	149	19374601	4.54	ug/mL#	95
86) Benzo[b]fluoranthene	15.958	252	15732371m	4.47	ug/mL	
87) Benzo[k]fluoranthene	15.986	252	19249971m	5.27	ug/mL	
88) Benzo[a]pyrene	16.310	252	13940326	4.76	ug/mL	98
89) Indeno[1,2,3-cd]pyrene	17.660	276	15475025	4.87	ug/mL	100
90) Dibenz[a,h]anthracene	17.691	278	13133692	5.04	ug/mL	100
91) Benzo[ghi]perylene	18.035	276	13045042	5.15	ug/mL	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 01301012.D  
 Acq On : 17 Dec 2023 10:38 pm  
 Operator : MAH  
 Sample : ~~BDK0169~~-MS1  
 Misc : *BDL BMM R/19/23*  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Dec 18 15:36:39 2023  
 Quant Method : T:\Data1\MSD4\METHODS\2023\BNA-1217.M  
 Quant Title : EPA 8270D / EPA 625.1 - MSD4  
 QLast Update : Mon Dec 18 10:44:19 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
<b>Internal Standards</b>						
1) 1,4-Dichlorobenzene-d4	6.075	150	31770775	20.00	ug/mL	0.00
19) Naphthalene-d8	7.572	136	71358050	20.00	ug/mL	0.00
36) Acenaphthene-d10	9.700	164	42408298	20.00	ug/mL	0.00
61) Phenanthrene-d10	11.516	188	72840927	20.00	ug/mL	0.00
76) Chrysene-d12	14.753	240	57046256	20.00	ug/mL	0.00
84) Perylene-d12	16.378	264	57724264	20.00	ug/mL	0.00
<b>System Monitoring Compounds</b>						
3) 2-Fluorophenol	4.607	112	44559437	35.65	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	71.30%	
4) Phenol-d5	5.670	99	62996608	41.59	ug/mL	-0.01
Spiked Amount	50.000		Recovery	=	83.18%	
20) Nitrobenzene-d5	6.732	82	28332263	18.87	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	75.48%	
40) 2-Fluorobiphenyl	8.887	172	55412580	21.55	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	86.20%	
65) 2,4,6-Tribromophenol	10.667	332	22997412	43.74	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	87.48%	
78) Terphenyl-d14	13.486	244	60226052	20.85	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	83.40%	
<b>Target Compounds</b>						
2) Nitrosodimethylamine	3.060	74	3275950	3.88	ug/mL	100
5) Pyridine	3.080	79	3247441m	2.77	ug/mL	
6) Aniline	5.718	93	1970308m	1.41	ug/mL	
7) Phenol	5.683	94	7535181	4.54	ug/mL#	67
8) bis(2-Chloroethyl)ether	5.795	63	3581423	4.07	ug/mL	93
9) 2-Chlorophenol	5.829	128	6580755	4.16	ug/mL	98
10) 1,3-Dichlorobenzene	6.003	146	6818523	4.13	ug/mL	94
11) 1,4-Dichlorobenzene	6.092	146	7022092m	4.16	ug/mL	
12) Benzyl alcohol	6.248	79	4640992m	4.54	ug/mL	
13) 1,2-Dichlorobenzene	6.262	146	6770283	4.24	ug/mL	99
14) 2-Methylphenol	6.372	107	5143090	4.44	ug/mL	98
15) bis(2-chloro-1-methyle...	6.403	121	2337954	4.19	ug/mL	100
16) 3,4-Methylphenol	6.557	108	6310082	4.55	ug/mL	98
17) n-Nitroso-di-n-propyla...	6.560	70	4249424	4.33	ug/mL	98
18) Hexachloroethane	6.650	117	2455677	4.09	ug/mL	96
21) Nitrobenzene	6.753	77	5983361	4.04	ug/mL	96
22) Isophorone	7.034	82	12497062	4.38	ug/mL	96
23) 2-Nitrophenol	7.122	139	3353226	3.91	ug/mL	96
24) 2,4-Dimethylphenol	7.179	107	6255572	6.36	ug/mL	91
25) bis(2-Chloroethoxy)met...	7.304	93	7662586	4.36	ug/mL#	96
26) Benzoic acid	7.277	105	3429232m	10.12	ug/mL	
27) 2,4-Dichlorophenol	7.404	162	5425059	4.38	ug/mL	99
28) 1,2,4-Trichlorobenzene	7.500	180	5877695	4.21	ug/mL	99
29) Naphthalene	7.596	128	19388338	4.35	ug/mL	99
31) 4-Chloroaniline	7.683	127	2649268	2.80	ug/mL	91
32) Hexachlorobutadiene	7.734	225	3302119	4.27	ug/mL	99
33) 4-Chloro-3-methylphenol	8.261	107	5569522	4.60	ug/mL	96
34) 2-Methylnaphthalene	8.431	142	13298400	4.55	ug/mL	95
35) 1-Methylnaphthalene	8.549	142	12733016	4.47	ug/mL	95

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 01301012.D  
 Acq On : 17 Dec 2023 10:38 pm  
 Operator : MAH  
 Sample : BDK0169-MS1  
 Misc :  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Dec 18 15:36:39 2023  
 Quant Method : T:\Data1\MSD4\METHODS\2023\BNA-1217.M  
 Quant Title : EPA 8270D / EPA 625.1 - MSD4  
 QLast Update : Mon Dec 18 10:44:19 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) Hexachlorocyclopentadiene	8.608	237	3327859	6.18	ug/mL	99
38) 2,4,6-Trichlorophenol	8.775	196	4113112	4.59	ug/mL	99
39) 2,4,5-Trichlorophenol	8.815	196	4308760	4.56	ug/mL	99
41) 2-Chloronaphthalene	9.021	127	4483718	4.44	ug/mL	96
42) 2-Nitroaniline	9.164	65	3030690	4.58	ug/mL	86
43) 1,4-Dinitrobenzene	9.353	168	2058003	4.57	ug/mL	97
44) Dimethyl phthalate	9.397	163	14469458	4.68	ug/mL	100
45) 2,6-Dinitrotoluene	9.471	165	3513587	4.61	ug/mL	89
46) Acenaphthylene	9.525	152	19222618	4.52	ug/mL	99
47) 1,3-Dinitrobenzene	9.434	168	2463508	4.57	ug/mL	93
48) 1,2-Dinitrobenzene	9.530	168	1710558	4.62	ug/mL#	94
49) 3-Nitroaniline	9.671	65	1250495	2.62	ug/mL#	65
50) Acenaphthene	9.737	153	13049286	4.72	ug/mL	98
51) 2,4-Dinitrophenol	9.796	184	1052632	4.57	ug/mL#	86
52) 4-Nitrophenol	9.885	65	1508679	4.19	ug/mL	94
53) 2,4-Dinitrotoluene	9.954	165	4372179	4.76	ug/mL	97
54) Dibenzofuran	9.948	168	18067774	4.69	ug/mL	97
55) 2,3,5,6-tetrachlorophenol	10.044	232	3479822	4.62	ug/mL#	79
56) 2,3,4,6-Tetrachlorophenol	10.097	232	3658222	4.64	ug/mL	93
57) Diethyl phthalate	10.258	149	13938220	4.78	ug/mL	100
58) Fluorene	10.367	166	14912718	4.79	ug/mL	100
59) 4-Chlorophenyl-phenyle...	10.381	204	7550742	4.79	ug/mL	97
60) 4-Nitroaniline	10.420	138	1958784	3.63	ug/mL	93
62) 4,6-Dinitro-2-methylph...	10.440	198	1839985	4.69	ug/mL	88
63) n-Nitrosodiphenylamine	10.533	169	12617630	4.85	ug/mL	98
64) 1,2-Diphenyl hydrazine	10.575	77	12566552	4.45	ug/mL	97
66) 4-Bromophenyl-phenylether	10.979	248	4658949	4.68	ug/mL	93
67) Hexachlorobenzene	11.018	284	5426440	4.67	ug/mL	92
68) Pentachlorophenol	11.275	266	2284099	4.26	ug/mL	99
69) Phenanthrene	11.543	178	21295873	4.75	ug/mL	98
70) Anthracene	11.604	178	21433864	4.77	ug/mL	98
71) Carbazole	11.816	167	14208334	5.32	ug/mL#	88
72) Di-n-butyl phthalate	12.264	149	23170400	4.86	ug/mL	98
73) Fluoranthene	12.994	202	21802016	4.93	ug/mL	97
75) Bis(2-ethylhexyl)adipate	14.198	129	8260376	4.56	ug/mL	98
77) Pyrene	13.269	202	22161716	4.54	ug/mL	97
79) Butyl benzyl phthalate	14.100	149	8860252	4.47	ug/mL	92
80) Benzo[a]anthracene	14.737	228	18876550	4.68	ug/mL	97
81) 3,3'-Dichlorobenzidine	14.730	252	6041120	8.15	ug/mL	98
82) Chrysene	14.777	228	18550595m	5.00	ug/mL	
83) Bis(2-ethylhexyl)phtha...	14.800	149	12461476	4.50	ug/mL	99
85) Di-n-octyl phthalate	15.560	149	18192755	4.39	ug/mL#	95
86) Benzo[b]fluoranthene	15.958	252	17328106m	5.07	ug/mL	
87) Benzo[k]fluoranthene	15.986	252	18349998m	5.18	ug/mL	
88) Benzo[a]pyrene	16.309	252	13901135m	4.89	ug/mL	
89) Indeno[1,2,3-cd]pyrene	17.658	276	15499523	5.03	ug/mL	100
90) Dibenz[a,h]anthracene	17.689	278	13142874	5.20	ug/mL	100
91) Benzo[ghi]perylene	18.032	276	13187366	5.37	ug/mL	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 01401013.D  
 Acq On : 17 Dec 2023 11:05 pm  
 Operator : MAH  
 Sample : BDK0169-MSD1  
 Misc : BDL BMM R/M/23  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Dec 18 15:40:08 2023  
 Quant Method : T:\Data1\MSD4\METHODS\2023\BNA-1217.M  
 Quant Title : EPA 8270D / EPA 625.1 - MSD4  
 QLast Update : Mon Dec 18 10:44:19 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	6.076	150	27889067	20.00	ug/mL	0.00
19) Naphthalene-d8	7.571	136	62884758	20.00	ug/mL	0.00
36) Acenaphthene-d10	9.699	164	37124354	20.00	ug/mL	0.00
61) Phenanthrene-d10	11.515	188	63211596	20.00	ug/mL	0.00
76) Chrysenè-d12	14.750	240	48853539	20.00	ug/mL	-0.01
84) Perylene-d12	16.376	264	49217439	20.00	ug/mL	0.00
System Monitoring Compounds						
3) 2-Fluorophenol	4.607	112	39458167	35.96	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	71.92%	
4) Phenol-d5	5.669	99	55441836	41.69	ug/mL	-0.01
Spiked Amount	50.000		Recovery	=	83.38%	
20) Nitrobenzene-d5	6.731	82	24066226	18.19	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	72.76%	
40) 2-Fluorobiphenyl	8.887	172	47204753	20.97	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	83.88%	
65) 2,4,6-Tribromophenol	10.665	332	19853226	43.51	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	87.02%	
78) Terphenyl-d14	13.486	244	52152428	21.08	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	84.32%	
Target Compounds						
2) Nitrosodimethylamine	3.060	74	2802627	3.78	ug/mL	100
5) Pyridine	3.075	79	3594417m	3.49	ug/mL	
6) Aniline	5.714	93	3591711m	2.92	ug/mL	
7) Phenol	5.682	94	6686853	4.59	ug/mL#	76
8) bis(2-Chloroethyl)ether	5.795	63	3047694	3.95	ug/mL	92
9) 2-Chlorophenol	5.829	128	5684171	4.09	ug/mL	98
10) 1,3-Dichlorobenzene	6.003	146	5868559	4.05	ug/mL	94
11) 1,4-Dichlorobenzene	6.092	146	6035417m	4.07	ug/mL	
12) Benzyl alcohol	6.249	79	3975186m	4.43	ug/mL	
13) 1,2-Dichlorobenzene	6.262	146	5771848	4.12	ug/mL	100
14) 2-Methylphenol	6.372	107	4390469	4.32	ug/mL	99
15) bis(2-chloro-1-methyle...	6.404	121	1993058	4.07	ug/mL	100
16) 3+4-Methylphenol	6.556	108	5372334	4.41	ug/mL	99
17) n-Nitroso-di-n-propyla...	6.559	70	3653476	4.24	ug/mL	99
18) Hexachloroethane	6.649	117	2102764	3.99	ug/mL	96
21) Nitrobenzene	6.752	77	5111903	3.92	ug/mL	96
22) Isophorone	7.033	82	10514515	4.18	ug/mL	95
23) 2-Nitrophenol	7.120	139	2970536m	3.93	ug/mL	
24) 2,4-Dimethylphenol	7.179	107	5187286	5.98	ug/mL	91
25) bis(2-Chloroethoxy)met...	7.303	93	6532481	4.22	ug/mL#	95
26) Benzoic acid	7.272	105	2339148	8.09	ug/mL#	79
27) 2,4-Dichlorophenol	7.404	162	4580214	4.20	ug/mL	99
28) 1,2,4-Trichlorobenzene	7.500	180	5041757	4.09	ug/mL	99
29) Naphthalene	7.595	128	16619617	4.23	ug/mL	99
31) 4-Chloroaniline	7.683	127	2942202m	3.53	ug/mL	
32) Hexachlorobutadiene	7.734	225	2842524	4.17	ug/mL	99
33) 4-Chloro-3-methylphenol	8.261	107	4572202	4.28	ug/mL	95
34) 2-Methylnaphthalene	8.430	142	11277579	4.38	ug/mL	95
35) 1-Methylnaphthalene	8.548	142	10853616	4.32	ug/mL	95

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 01401013.D  
 Acq On : 17 Dec 2023 11:05 pm  
 Operator : MAH  
 Sample : BDK0169-MSD1  
 Misc :  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Dec 18 15:40:08 2023  
 Quant Method : T:\Data1\MSD4\METHODS\2023\BNA-1217.M  
 Quant Title : EPA 8270D / EPA 625.1 - MSD4  
 QLast Update : Mon Dec 18 10:44:19 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev (Min)
37) Hexachlorocyclopentadiene	8.607	237	2775528	5.89	ug/mL	99
38) 2,4,6-Trichlorophenol	8.774	196	3458990	4.41	ug/mL	100
39) 2,4,5-Trichlorophenol	8.816	196	3610221	4.36	ug/mL	99
41) 2-Chloronaphthalene	9.021	127	3790458	4.29	ug/mL	96
42) 2-Nitroaniline	9.164	65	2525358	4.36	ug/mL	84
43) 1,4-Dinitrobenzene	9.352	168	1644764	4.18	ug/mL	96
44) Dimethyl phthalate	9.396	163	12255295	4.52	ug/mL	100
45) 2,6-Dinitrotoluene	9.470	165	2922297	4.38	ug/mL	89
46) Acenaphthylylene	9.524	152	16159490	4.34	ug/mL	98
47) 1,3-Dinitrobenzene	9.433	168	2021307	4.29	ug/mL	93
48) 1,2-Dinitrobenzene	9.528	168	1430565	4.42	ug/mL#	93
49) 3-Nitroaniline	9.671	65	1057805	2.53	ug/mL#	66
50) Acenaphthene	9.736	153	10965687	4.53	ug/mL	98
51) 2,4-Dinitrophenol	9.796	184	792025	4.00	ug/mL#	86
52) 4-Nitrophenol	9.884	65	1181971	3.76	ug/mL	93
53) 2,4-Dinitrotoluene	9.953	165	3626050	4.51	ug/mL	97
54) Dibenzofuran	9.948	168	15173043	4.50	ug/mL	97
55) 2,3,5,6-tetrachlorophenol	10.045	232	2862848	4.34	ug/mL#	79
56) 2,3,4,6-Tetrachlorophenol	10.097	232	3034806	4.40	ug/mL	92
57) Diethyl phthalate	10.257	149	11722557	4.59	ug/mL	99
58) Fluorene	10.367	166	12541478	4.61	ug/mL	100
59) 4-Chlorophenyl-phenyle...	10.381	204	6331057	4.59	ug/mL	97
60) 4-Nitroaniline	10.419	138	2001822m	4.24	ug/mL	
62) 4,6-Dinitro-2-methylph...	10.440	198	1477110	4.36	ug/mL#	87
63) n-Nitrosodiphenylamine	10.531	169	10628015	4.71	ug/mL	98
64) 1,2-Diphenyl hydrazine	10.575	77	10559280	4.31	ug/mL	96
66) 4-Bromophenyl-phenylether	10.978	248	3866544	4.47	ug/mL	94
67) Hexachlorobenzene	11.018	284	4574976	4.54	ug/mL	92
68) Pentachlorophenol	11.274	266	1825913	3.94	ug/mL	99
69) Phenanthrene	11.542	178	17918231	4.60	ug/mL	98
70) Anthracene	11.603	178	17973962	4.61	ug/mL	97
71) Carbazole	11.817	167	13033038	5.63	ug/mL#	88
72) Di-n-butyl phthalate	12.263	149	19784872	4.78	ug/mL	98
73) Fluoranthene	12.994	202	18527104	4.83	ug/mL	97
75) Bis(2-ethylhexyl)adipate	14.198	129	7083517	4.51	ug/mL	98
77) Pyrene	13.269	202	18739146	4.48	ug/mL	97
79) Butyl benzyl phthalate	14.100	149	7548439	4.45	ug/mL	92
80) Benzo[a]anthracene	14.736	228	16067114	4.65	ug/mL	97
81) 3,3'-Dichlorobenzidine	14.730	252	7155489	11.27	ug/mL	97
82) Chrysene	14.780	228	15663338	4.93	ug/mL#	91
83) Bis(2-ethylhexyl)phtha...	14.799	149	10790151	4.55	ug/mL	99
85) Di-n-octyl phthalate	15.559	149	15573825	4.41	ug/mL#	95
86) Benzo[b]fluoranthene	15.959	252	13639262	4.68	ug/mL	96
87) Benzo[k]fluoranthene	15.989	252	15390708	5.10	ug/mL	99
88) Benzo[a]pyrene	16.309	252	11195702	4.62	ug/mL	98
89) Indeno[1,2,3-cd]pyrene	17.659	276	13235134	5.04	ug/mL	100
90) Dibenz[a,h]anthracene	17.689	278	11243275	5.22	ug/mL	100
91) Benzo[ghi]perylene	18.032	276	11359636	5.43	ug/mL	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 01501014.D  
 Acq On : 17 Dec 2023 11:33 pm  
 Operator : MAH  
 Sample : BDK0169-BLK1  
 Misc : BDL BMM 12/19/23  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: Dec 18 15:42:41 2023  
 Quant Method : T:\Data1\MSD4\METHODS\2023\BNA-1217.M  
 Quant Title : EPA 8270D / EPA 625.1 - MSD4  
 QLast Update : Mon Dec 18 10:44:19 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	6.077	150	37909995	20.00	ug/mL	0.00
19) Naphthalene-d8	7.572	136	82356642	20.00	ug/mL	0.00
36) Acenaphthene-d10	9.699	164	47941361	20.00	ug/mL	0.00
61) Phenanthrene-d10	11.517	188	81041627	20.00	ug/mL	0.00
76) Chrysene-d12	14.751	240	59313269	20.00	ug/mL	-0.01
84) Perylene-d12	16.378	264	56791613	20.00	ug/mL	0.00
System Monitoring Compounds						
3) 2-Fluorophenol	4.613	112	50804815	34.06	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	68.12%	
4) Phenol-d5	5.672	99	72819866	40.29	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	80.58%	
20) Nitrobenzene-d5	6.733	82	29305512	16.91	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	67.64%	
40) 2-Fluorobiphenyl	8.888	172	54658773	18.81	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	75.24%	
65) 2,4,6-Tribromophenol	10.667	332	23681791	40.48	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	80.96%	
78) Terphenyl-d14	13.487	244	56158390	18.70	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	74.80%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 01601016.D  
 Acq On : 18 Dec 2023 12:27 am  
 Operator : MAH  
 Sample : MDK0709-01  
 Misc :  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: Dec 18 15:44:25 2023  
 Quant Method : T:\Data1\MSD4\METHODS\2023\BNA-1217.M  
 Quant Title : EPA 8270D / EPA 625.1 - MSD4  
 Qlast Update : Mon Dec 18 10:44:19 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
<b>Internal Standards</b>						
1) 1,4-Dichlorobenzene-d4	6.074	150	33212386	20.00	ug/mL	0.00
19) Naphthalene-d8	7.570	136	75302044	20.00	ug/mL	0.00
36) Acenaphthene-d10	9.699	164	44469446	20.00	ug/mL	0.00
61) Phenanthrene-d10	11.517	188	76428214	20.00	ug/mL	0.00
76) Chrysenè-d12	14.751	240	55569456	20.00	ug/mL	-0.01
84) Perylene-d12	16.377	264	51335988	20.00	ug/mL	0.00
<b>System Monitoring Compounds</b>						
3) 2-Fluorophenol	4.611	112	49288582	37.72	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	75.44%	
4) Phenol-d5	5.669	99	65648743	41.46	ug/mL	-0.01
Spiked Amount	50.000		Recovery	=	82.92%	
20) Nitrobenzene-d5	6.732	82	33977748	21.44	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	85.76%	
40) 2-Fluorobiphenyl	8.888	172	61229373	22.71	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	90.84%	
65) 2,4,6-Tribromophenol	10.667	332	22731363	41.20	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	82.40%	
78) Terphenyl-d14	13.488	244	70532323	25.06	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	100.24%	
<b>Target Compounds</b>						
63) n-Nitrosodiphenylamine	10.531	169	274770	0.10	ug/mL	98
83) Bis(2-ethylhexyl)phtha...	14.801	149	349775	0.13	ug/mL	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

*EPL*  
*07*  
*11/15/24*

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 01701017.D  
 Acq On : 18 Dec 2023 12:54 am  
 Operator : MAH  
 Sample : MDK0709-02  
 Misc :  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: Dec 18 15:45:04 2023  
 Quant Method : T:\Data1\MSD4\METHODS\2023\BNA-1217.M  
 Quant Title : EPA 8270D / EPA 625.1 - MSD4  
 Qlast Update : Mon Dec 18 10:44:19 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
<b>Internal Standards</b>						
1) 1,4-Dichlorobenzene-d4	6.073	150	32262044	20.00	ug/mL	0.00
19) Naphthalene-d8	7.570	136	73950240	20.00	ug/mL	0.00
36) Acenaphthene-d10	9.698	164	43435851	20.00	ug/mL	0.00
61) Phenanthrene-d10	11.516	188	73343577	20.00	ug/mL	0.00
76) Chrysene-d12	14.750	240	54681280	20.00	ug/mL	-0.01
84) Perylene-d12	16.377	264	50754044	20.00	ug/mL	0.00
<b>System Monitoring Compounds</b>						
3) 2-Fluorophenol	4.608	112	48165528	37.94	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	75.88%	
4) Phenol-d5	5.668	99	63700499	41.41	ug/mL	-0.01
Spiked Amount	50.000		Recovery	=	82.82%	
20) Nitrobenzene-d5	6.731	82	32529474	20.91	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	83.64%	
40) 2-Fluorobiphenyl	8.887	172	60305263	22.90	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	91.60%	
65) 2,4,6-Tribromophenol	10.666	332	22621746	42.73	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	85.46%	
78) Terphenyl-d14	13.488	244	68267846	24.65	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	98.60%	

Target Compounds

Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 01801018.D  
 Acq On : 18 Dec 2023 1:20 am  
 Operator : MAH  
 Sample : MDK0709-03  
 Misc :  
 ALS Vial : 18 Sample Multiplier: 1

Quant Time: Dec 18 15:50:21 2023  
 Quant Method : T:\Data1\MSD4\METHODS\2023\BNA-1217.M  
 Quant Title : EPA 8270D / EPA 625.1 - MSD4  
 Last Update : Mon Dec 18 10:44:19 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
<b>Internal Standards</b>						
1) 1,4-Dichlorobenzene-d4	6.075	150	34796644	20.00	ug/mL	0.00
19) Naphthalene-d8	7.571	136	77708216	20.00	ug/mL	0.00
36) Acenaphthene-d10	9.699	164	45844366	20.00	ug/mL	0.00
61) Phenanthrene-d10	11.517	188	77212541	20.00	ug/mL	0.00
76) Chrysene-d12	14.750	240	57254071	20.00	ug/mL	-0.01
84) Perylene-d12	16.378	264	53835058	20.00	ug/mL	0.00
<b>System Monitoring Compounds</b>						
3) 2-Fluorophenol	4.610	112	51522208	37.63	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	75.26%	
4) Phenol-d5	5.671	99	69155905	41.68	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	83.36%	
20) Nitrobenzene-d5	6.732	82	34090060	20.85	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	83.40%	
40) 2-Fluorobiphenyl	8.887	172	61378981	22.09	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	88.36%	
65) 2,4,6-Tribromophenol	10.667	332	25209818	45.23	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	90.46%	
78) Terphenyl-d14	13.489	244	71109955	24.52	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	98.08%	
<b>Target Compounds</b>						
57) Diethyl phthalate	10.255	149	356218	0.11	ug/mL#	96
83) Bis(2-ethylhexyl)phtha...	14.799	149	305248	0.11	ug/mL	96

*BDL*  
*(S)*

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 01901019.D  
 Acq On : 18 Dec 2023 1:48 am  
 Operator : MAH  
 Sample : MDK0709-04  
 Misc :  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: Dec 18 15:55:54 2023  
 Quant Method : T:\Data1\MSD4\METHODS\2023\BNA-1217.M  
 Quant Title : EPA 8270D / EPA 625.1 - MSD4  
 Qlast Update : Mon Dec 18 10:44:19 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
<b>Internal Standards</b>						
1) 1,4-Dichlorobenzene-d4	6.074	150	31592844	20.00	ug/mL	0.00
79) Naphthalene-d8	7.570	136	71728043	20.00	ug/mL	0.00
36) Acenaphthene-d10	9.699	164	42304360	20.00	ug/mL	0.00
61) Phenanthrene-d10	11.516	188	71321126	20.00	ug/mL	0.00
76) Chrysene-d12	14.751	240	52367833	20.00	ug/mL	-0.01
84) Perylene-d12	16.377	264	47451789	20.00	ug/mL	0.00
<b>System Monitoring Compounds</b>						
3) 2-Fluorophenol	4.610	112	49792223	40.06	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	80.12%	
4) Phenol-d5	5.669	99	64521681	42.83	ug/mL	-0.01
Spiked Amount	50.000		Recovery	=	85.66%	
20) Nitrobenzene-d5	6.732	82	31427511	20.82	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	83.28%	
40) 2-Fluorobiphenyl	8.887	172	56503916	22.03	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	88.12%	
65) 2,4,6-Tribromophenol	10.666	332	23209874	45.08	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	90.16%	
78) Terphenyl-d14	13.488	244	65464009	24.68	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	98.72%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 02001020.D  
 Acq On : 18 Dec 2023 2:15 am  
 Operator : MAH  
 Sample : MDK0709-05  
 Misc :  
 ALS Vial : 20 Sample Multiplier: 1

Quant Time: Dec 18 16:03:59 2023  
 Quant Method : T:\Data1\MSD4\METHODS\2023\BNA-1217.M  
 Quant Title : EPA 8270D / EPA 625.1 - MSD4  
 Qlast Update : Mon Dec 18 10:44:19 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
<b>Internal Standards</b>						
1) 1,4-Dichlorobenzene-d4	6.074	150	31013906	20.00	ug/mL	0.00
19) Naphthalene-d8	7.570	136	71406845	20.00	ug/mL	0.00
36) Acenaphthene-d10	9.698	164	41803896	20.00	ug/mL	0.00
61) Phenanthrene-d10	11.516	188	70854544	20.00	ug/mL	0.00
76) Chrysene-d12	14.749	240	49286879	20.00	ug/mL	-0.01
84) Perylene-d12	16.375	264	43910335	20.00	ug/mL	0.00
<b>System Monitoring Compounds</b>						
3) 2-Fluorophenol	4.610	112	51469224	42.18	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	84.36%	
4) Phenol-d5	5.669	99	65884845	44.56	ug/mL	-0.01
Spiked Amount	50.000		Recovery	=	89.12%	
20) Nitrobenzene-d5	6.731	82	31467600	20.94	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	83.76%	
40) 2-Fluorobiphenyl	8.887	172	57742563	22.79	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	91.16%	
65) 2,4,6-Tribromophenol	10.667	332	23833554	46.60	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	93.20%	
78) Terphenyl-d14	13.487	244	62823607	25.17	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	100.68%	
<b>Target Compounds</b>						
83) Bis(2-ethylhexyl)phtha...	14.799	149	276521	0.12	ug/mL	99

BR  
02

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 02101021.D  
 Acq On : 18 Dec 2023 2:43 am  
 Operator : MAH  
 Sample : MDK0709-06  
 Misc :  
 ALS Vial : 21 Sample Multiplier: 1

Quant Time: Dec 18 16:05:51 2023  
 Quant Method : T:\Data1\MSD4\METHODS\2023\BNA-1217.M  
 Quant Title : EPA 8270D / EPA 625.1 - MSD4  
 Qlast Update : Mon Dec 18 10:44:19 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
<b>Internal Standards</b>						
1) 1,4-Dichlorobenzene-d4	6.074	150	30792724	20.00	ug/mL	0.00
19) Naphthalene-d8	7.570	136	69906873	20.00	ug/mL	0.00
36) Acenaphthene-d10	9.699	164	41691643	20.00	ug/mL	0.00
61) Phenanthrene-d10	11.516	188	70533910	20.00	ug/mL	0.00
76) Chrysene-d12	14.750	240	51206655	20.00	ug/mL	-0.01
84) Perylene-d12	16.376	264	46835278	20.00	ug/mL	0.00
<b>System Monitoring Compounds</b>						
3) 2-Fluorophenol	4.609	112	47554975	39.25	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	78.50%	
4) Phenol-d5	5.669	99	61178923	41.67	ug/mL	-0.01
Spiked Amount	50.000		Recovery	=	83.34%	
20) Nitrobenzene-d5	6.731	82	30727450	20.89	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	83.56%	
40) 2-Fluorobiphenyl	8.887	172	55634411	22.01	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	88.04%	
65) 2,4,6-Tribromophenol	10.666	332	22115291	43.43	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	86.86%	
78) Terphenyl-d14	13.488	244	64226207	24.77	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	99.08%	
<b>Target Compounds</b>						
83) Bis(2-ethylhexyl)phtha...	14.800	149	308002	0.12	ug/mL	98

*BPL*

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 02201022.D  
 Acq On : 18 Dec 2023 3:11 am  
 Operator : MAH  
 Sample : MDK0709-07  
 Misc :  
 ALS Vial : 22 Sample Multiplier: 1

Quant Time: Dec 18 16:08:07 2023  
 Quant Method : T:\Data1\MSD4\METHODS\2023\BNA-1217.M  
 Quant Title : EPA 8270D / EPA 625.1 - MSD4  
 Last Update : Mon Dec 18 10:44:19 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	Qvalue
<b>Internal Standards</b>							
1) 1,4-Dichlorobenzene-d4	6.073	150	29361695	20.00	ug/mL	0.00	
19) Naphthalene-d8	7.570	136	67051324	20.00	ug/mL	0.00	
36) Acenaphthene-d10	9.698	164	39530383	20.00	ug/mL	0.00	
61) Phenanthrene-d10	11.515	188	67135067	20.00	ug/mL	0.00	
76) Chrysene-d12	14.750	240	46672511	20.00	ug/mL	-0.01	
84) Perylene-d12	16.376	264	41099035	20.00	ug/mL	0.00	
<b>System Monitoring Compounds</b>							
3) 2-Fluorophenol	4.609	112	47544525	41.15	ug/mL	0.00	
Spiked Amount	50.000		Recovery	=	82.30%		
4) Phenol-d5	5.668	99	62119318	44.37	ug/mL	-0.01	
Spiked Amount	50.000		Recovery	=	88.74%		
20) Nitrobenzene-d5	6.730	82	28780803	20.40	ug/mL	0.00	
Spiked Amount	25.000		Recovery	=	81.60%		
40) 2-Fluorobiphenyl	8.887	172	53049600	22.14	ug/mL	0.00	
Spiked Amount	25.000		Recovery	=	88.56%		
65) 2,4,6-Tribromophenol	10.666	332	22016015	45.43	ug/mL	0.00	
Spiked Amount	50.000		Recovery	=	90.86%		
78) Terphenyl-d14	13.487	244	58157186	24.61	ug/mL	0.00	
Spiked Amount	25.000		Recovery	=	98.44%		
<b>Target Compounds</b>							
72) Di-n-butyl phthalate	12.262	149	602296	0.14	ug/mL	98	
83) Bis(2-ethylhexyl)phtha...	14.800	149	288401	0.13	ug/mL	99	

*BDL*

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 02301023.D  
 Acq On : 18 Dec 2023 3:37 am  
 Operator : MAH  
 Sample : MDK0709-08  
 Misc :  
 ALS Vial : 23 Sample Multiplier: 1

Quant Time: Dec 18 16:10:38 2023  
 Quant Method : T:\Data1\MSD4\METHODS\2023\BNA-1217.M  
 Quant Title : EPA 8270D / EPA 625.1 - MSD4  
 QLast Update : Mon Dec 18 10:44:19 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
<b>Internal Standards</b>						
1) 1,4-Dichlorobenzene-d4	6.073	150	25228456	20.00	ug/mL	0.00
19) Naphthalene-d8	7.569	136	58341051	20.00	ug/mL	0.00
36) Acenaphthene-d10	9.698	164	33276006	20.00	ug/mL	0.00
61) Phenanthrene-d10	11.514	188	52991974	20.00	ug/mL	0.00
76) Chrysene-d12	14.747	240	35644717	20.00	ug/mL	-0.02
84) Perylene-d12	16.373	264	30413108	20.00	ug/mL	-0.01
<b>System Monitoring Compounds</b>						
3) 2-Fluorophenol	4.608	112	42629274	42.94	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	85.88%	
4) Phenol-d5	5.667	99	54935087	45.67	ug/mL	-0.01
Spiked Amount	50.000		Recovery	=	91.34%	
20) Nitrobenzene-d5	6.729	82	26459239	21.55	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	86.20%	
40) 2-Fluorobiphenyl	8.886	172	49363889	24.47	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	97.88%	
65) 2,4,6-Tribromophenol	10.664	332	18474174	48.29	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	96.58%	
78) Terphenyl-d14	13.485	244	50140710	27.78	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	111.12%	
<b>Target Compounds</b>						
8) bis(2-Chloroethyl)ether	5.927	63	93610	0.13	ug/mL#	25
49) 3-Nitroaniline	9.697	65	84819	0.23	ug/mL#	1
72) Di-n-butyl phthalate	12.262	149	434357	0.13	ug/mL#	98
83) Bis(2-ethylhexyl)phtha...	14.799	149	2599862	1.50	ug/mL	99

2 CAL AVG-50% BMM 12/18/23

ND Poor Q value  
 732L  
 (4)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 02401024.D  
 Acq On : 18 Dec 2023 4:04 am  
 Operator : MAH  
 Sample : MDK0709-09  
 Misc :  
 ALS Vial : 24 Sample Multiplier: 1

Quant Time: Dec 18 16:12:54 2023  
 Quant Method : T:\Data1\MSD4\METHODS\2023\BNA-1217.M  
 Quant Title : EPA 8270D / EPA 625.1 - MSD4  
 QLast Update : Mon Dec 18 10:44:19 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
<b>Internal Standards</b>						
1) 1,4-Dichlorobenzene-d4	6.075	150	34589488	20.00	ug/mL	0.00
19) Naphthalene-d8	7.571	136	76002026	20.00	ug/mL	0.00
36) Acenaphthene-d10	9.699	164	44811103	20.00	ug/mL	0.00
61) Phenanthrene-d10	11.516	188	75530840	20.00	ug/mL	0.00
76) Chrysene-d12	14.750	240	58067406	20.00	ug/mL	-0.01
84) Perylene-d12	16.378	264	54330717	20.00	ug/mL	0.00
<b>System Monitoring Compounds</b>						
3) 2-Fluorophenol	4.610	112	53999396	39.68	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	79.36%	
4) Phenol-d5	5.672	99	72641224	44.05	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	88.10%	
20) Nitrobenzene-d5	6.733	82	32973716	20.62	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	82.48%	
40) 2-Fluorobiphenyl	8.888	172	59829641	22.02	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	88.08%	
65) 2,4,6-Tribromophenol	10.667	332	25146310	46.12	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	92.24%	
78) Terphenyl-d14	13.488	244	67828068	23.07	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	92.28%	
<b>Target Compounds</b>						
63) n-Nitrosodiphenylamine	10.665	169	-693810	Below Cal	#	27
72) Di-n-butyl phthalate	12.262	149	656423	0.13	ug/mL	99
83) Bis(2-ethylhexyl)phtha...	14.799	149	951153	0.34	ug/mL	99

*BR*

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 02501025.D  
 Acq On : 18 Dec 2023 4:31 am  
 Operator : MAH  
 Sample : MDK0709-10  
 Misc :  
 ALS Vial : 25 Sample Multiplier: 1

Quant Time: Dec 18 16:15:58 2023  
 Quant Method : T:\Data1\MSD4\METHODS\2023\BNA-1217.M  
 Quant Title : EPA 8270D / EPA 625.1 - MSD4  
 Last Update : Mon Dec 18 10:44:19 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
<b>Internal Standards</b>						
1) 1,4-Dichlorobenzene-d4	6.073	150	30427516	20.00	ug/mL	0.00
19) Naphthalene-d8	7.569	136	68955402	20.00	ug/mL	0.00
36) Acenaphthene-d10	9.698	164	40083105	20.00	ug/mL	0.00
61) Phenanthrene-d10	11.515	188	65592932	20.00	ug/mL	0.00
76) Chrysene-d12	14.749	240	47098730	20.00	ug/mL	-0.01
84) Perylene-d12	16.375	264	43087952	20.00	ug/mL	-0.01
<b>System Monitoring Compounds</b>						
3) 2-Fluorophenol	4.610	112	51268877	42.82	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	85.64%	
4) Phenol-d5	5.669	99	66535614	45.86	ug/mL	-0.01
Spiked Amount	50.000		Recovery	=	91.72%	
20) Nitrobenzene-d5	6.732	82	32675503	22.52	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	90.08%	
40) 2-Fluorobiphenyl	8.887	172	58261287	23.98	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	95.92%	
65) 2,4,6-Tribromophenol	10.666	332	22801800	48.16	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	96.32%	
78) Terphenyl-d14	13.487	244	61995719	25.99	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	103.96%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 02601026.D  
 Acq On : 18 Dec 2023 4:58 am  
 Operator : MAH  
 Sample : MDK0709-11  
 Misc :  
 ALS Vial : 26 Sample Multiplier: 1

Quant Time: Dec 18 16:18:55 2023  
 Quant Method : T:\Data1\MSD4\METHODS\2023\BNA-1217.M  
 Quant Title : EPA 8270D / EPA 625.1 - MSD4  
 Qlast Update : Mon Dec 18 10:44:19 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	6.075	150	25071170	20.00	ug/mL	0.00
19) Naphthalene-d8	7.569	136	57164128	20.00	ug/mL	0.00
36) Acenaphthene-d10	9.697	164	32920887	20.00	ug/mL	0.00
61) Phenanthrene-d10	11.514	188	54852220	20.00	ug/mL	0.00
76) Chrysene-d12	14.748	240	41871279	20.00	ug/mL	-0.01
84) Perylene-d12	16.374	264	41021565	20.00	ug/mL	-0.01
System Monitoring Compounds						
3) 2-Fluorophenol	4.606	112	39758254	40.30	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	80.60%	
4) Phenol-d5	5.668	99	52646518	44.04	ug/mL	-0.01
Spiked Amount	50.000		Recovery	=	88.08%	
20) Nitrobenzene-d5	6.731	82	24145509	20.07	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	80.28%	
40) 2-Fluorobiphenyl	8.886	172	44388790	22.24	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	88.96%	
65) 2,4,6-Tribromophenol	10.664	332	17394928	43.93	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	87.86%	
78) Terphenyl-d14	13.486	244	50896188	24.00	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	96.00%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 02701027.D  
 Acq On : 18 Dec 2023 5:25 am  
 Operator : MAH  
 Sample : MDK0709-12  
 Misc :  
 ALS Vial : 27 Sample Multiplier: 1

Quant Time: Dec 18 16:20:52 2023  
 Quant Method : T:\Data1\MSD4\METHODS\2023\BNA-1217.M  
 Quant Title : EPA 8270D / EPA 625.1 - MSD4  
 QLast Update : Mon Dec 18 10:44:19 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
<b>Internal Standards</b>						
1) 1,4-Dichlorobenzene-d4	6.075	150	31146642	20.00	ug/mL	0.00
19) Naphthalene-d8	7.571	136	70499526	20.00	ug/mL	0.00
36) Acenaphthene-d10	9.698	164	41291829	20.00	ug/mL	0.00
61) Phenanthrene-d10	11.515	188	70410846	20.00	ug/mL	0.00
76) Chrysene-d12	14.750	240	55268687	20.00	ug/mL	-0.01
84) Perylene-d12	16.378	264	53667054	20.00	ug/mL	0.00
<b>System Monitoring Compounds</b>						
3) 2-Fluorophenol	4.609	112	46175865	37.68	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	75.36%	
4) Phenol-d5	5.670	99	61554251	41.45	ug/mL	-0.01
Spiked Amount	50.000		Recovery	=	82.90%	
20) Nitrobenzene-d5	6.731	82	28660581	19.32	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	77.28%	
40) 2-Fluorobiphenyl	8.887	172	54014768	21.58	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	86.32%	
65) 2,4,6-Tribromophenol	10.665	332	22663871	44.59	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	89.18%	
78) Terphenyl-d14	13.486	244	63966689	22.85	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	91.40%	
<b>Target Compounds</b>						
49) 3-Nitroaniline	9.697	65	102476	0.22	ug/mL#	Qvalue

*MD  
Q value*

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 02801028.D  
 Acq On : 18 Dec 2023 5:53 am  
 Operator : MAH  
 Sample : MDK0724-01  
 Misc :  
 ALS Vial : 28 Sample Multiplier: 1

Quant Time: Dec 18 16:22:49 2023  
 Quant Method : T:\Data1\MSD4\METHODS\2023\BNA-1217.M  
 Quant Title : EPA 8270D / EPA 625.1 - MSD4  
 QLast Update : Mon Dec 18 10:44:19 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
<b>Internal Standards</b>						
1) 1,4-Dichlorobenzene-d4	6.076	150	26363212	20.00	ug/mL	0.00
19) Naphthalene-d8	7.570	136	60188166	20.00	ug/mL	0.00
36) Acenaphthene-d10	9.697	164	35242628	20.00	ug/mL	0.00
61) Phenanthrene-d10	11.515	188	60092803	20.00	ug/mL	0.00
76) Chrysene-d12	14.749	240	46744555	20.00	ug/mL	-0.01
84) Perylene-d12	16.375	264	46306194	20.00	ug/mL	0.00
<b>System Monitoring Compounds</b>						
3) 2-Fluorophenol	4.607	112	35320050	34.05	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	68.10%	
4) Phenol-d5	5.669	99	49620298	39.48	ug/mL	-0.01
Spiked Amount	50.000		Recovery	=	78.96%	
20) Nitrobenzene-d5	6.731	82	22171673	17.51	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	70.04%	
40) 2-Fluorobiphenyl	8.886	172	40873976	19.13	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	76.52%	
65) 2,4,6-Tribromophenol	10.665	332	18646786	42.99	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	85.98%	
78) Terphenyl-d14	13.488	244	57175226	24.15	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	96.60%	
<b>Target Compounds</b>						
57) Diethyl phthalate	10.255	149	291987	0.12	ug/mL	100

*BRL*  
 (5)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 02901029.D  
 Acq On : 18 Dec 2023 6:21 am  
 Operator : MAH  
 Sample : MDK0735-01  
 Misc :  
 ALS Vial : 29 Sample Multiplier: 1

Quant Time: Dec 18 16:25:56 2023  
 Quant Method : T:\Data1\MSD4\METHODS\2023\BNA-1217.M  
 Quant Title : EPA 8270D / EPA 625.1 - MSD4  
 QLast Update : Mon Dec 18 10:44:19 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	6.074	150	29631187	20.00	ug/mL	0.00
19) Naphthalene-d8	7.570	136	67465260	20.00	ug/mL	0.00
36) Acenaphthene-d10	9.698	164	39090323	20.00	ug/mL	0.00
61) Phenanthrene-d10	11.515	188	65430256	20.00	ug/mL	0.00
76) Chrysene-d12	14.750	240	50909640	20.00	ug/mL	-0.01
84) Perylene-d12	16.376	264	49612217	20.00	ug/mL	0.00
System Monitoring Compounds						
3) 2-Fluorophenol	4.608	112	45995568	39.45	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	78.90%	
4) Phenol-d5	5.669	99	61175177	43.30	ug/mL	-0.01
Spiked Amount	50.000		Recovery	=	86.60%	
20) Nitrobenzene-d5	6.731	82	29581739	20.84	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	83.36%	
40) 2-Fluorobiphenyl	8.887	172	55331741	23.35	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	93.40%	
65) 2,4,6-Tribromophenol	10.665	332	21711465	45.97	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	91.94%	
78) Terphenyl-d14	13.488	244	62951886	24.42	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	97.68%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 03001030.D  
 Acq On : 18 Dec 2023 6:48 am  
 Operator : MAH  
 Sample : MDK0735-01-02  
 Misc : *BHM 12/19/23*  
 ALS Vial : 30 Sample Multiplier: 1

Quant Time: Dec 18 16:27:55 2023  
 Quant Method : T:\Data1\MSD4\METHODS\2023\BNA-1217.M  
 Quant Title : EPA 8270D / EPA 625.1 - MSD4  
 Last Update : Mon Dec 18 10:44:19 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
<b>Internal Standards</b>						
1) 1,4-Dichlorobenzene-d4	6.075	150	32669611	20.00	ug/mL	0.00
19) Naphthalene-d8	7.570	136	74012607	20.00	ug/mL	0.00
36) Acenaphthene-d10	9.698	164	43878508	20.00	ug/mL	0.00
61) Phenanthrene-d10	11.516	188	75863632	20.00	ug/mL	0.00
76) Chrysene-d12	14.750	240	61685781	20.00	ug/mL	-0.01
84) Perylene-d12	16.378	264	61993250	20.00	ug/mL	0.00
<b>System Monitoring Compounds</b>						
3) 2-Fluorophenol	4.609	112	50567051	39.34	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	78.68%	
4) Phenol-d5	5.670	99	67669603	43.44	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	86.88%	
20) Nitrobenzene-d5	6.731	82	31071091	19.95	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	79.80%	
40) 2-Fluorobiphenyl	8.886	172	58750777	22.09	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	88.36%	
65) 2,4,6-Tribromophenol	10.665	332	25263778	46.13	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	92.26%	
78) Terphenyl-d14	13.488	244	72365925	23.17	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	92.68%	
<b>Target Compounds</b>						
21) Nitrobenzene	6.785	77	525611	0.34	ug/mL#	24
57) Diethyl phthalate	10.255	149	414646	0.14	ug/mL	99

*ND*  
*Q value*

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 00401031.D  
 Acq On : 18 Dec 2023 7:15 am  
 Operator : MAH  
 Sample : BNA 10 PPM  
 Misc :  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 18 10:27:58 2023  
 Quant Method : T:\Data1\MSD4\METHODS\2023\BNA-1217.M  
 Quant Title : EPA 8270D / EPA 625.1 - MSD4  
 Qlast Update : Mon Dec 18 10:27:44 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
<b>Internal Standards</b>						
1) 1,4-Dichlorobenzene-d4	6.076	150	38582095	20.00	ug/mL	0.00
19) Naphthalene-d8	7.574	136	85080659	20.00	ug/mL	0.00
36) Acenaphthene-d10	9.703	164	51954444	20.00	ug/mL	0.00
61) Phenanthrene-d10	11.519	188	88711207	20.00	ug/mL	0.00
76) Chrysene-d12	14.758	240	69630556	20.00	ug/mL	0.00
84) Perylene-d12	16.383	264	75643989	20.00	ug/mL	0.00
<b>System Monitoring Compounds</b>						
3) 2-Fluorophenol	4.607	112	74535235m	48.10	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	96.20%	
4) Phenol-d5	5.676	99	87891924	46.46	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	92.92%	
20) Nitrobenzene-d5	6.737	82	42298009	23.02	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	92.08%	
40) 2-Fluorobiphenyl	8.890	172	78371912	24.82	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	99.28%	
65) 2,4,6-Tribromophenol	10.671	332	32029770	50.59	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	101.18%	
78) Terphenyl-d14	13.489	244	83297899	22.89	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	91.56%	
<b>Target Compounds</b>						
2) Nitrosodimethylamine	3.062	74	8834210	8.31	ug/mL	100
5) Pyridine	3.066	79	11834426m	7.93	ug/mL	
6) Aniline	5.718	93	12296164m	7.22	ug/mL	
7) Phenol	5.691	94	18331424	8.96	ug/mL#	93
8) bis(2-Chloroethyl)ether	5.800	63	9207301	8.19	ug/mL	93
9) 2-Chlorophenol	5.831	128	17722591	9.21	ug/mL	97
10) 1,3-Dichlorobenzene	6.004	146	18684992	9.45	ug/mL	94
11) 1,4-Dichlorobenzene	6.095	146	19038246	9.32	ug/mL	99
12) Benzyl alcohol	6.253	79	11128947m	8.52	ug/mL	
13) 1,2-Dichlorobenzene	6.262	146	18095411	9.40	ug/mL	100
14) 2-Methylphenol	6.373	107	13108862m	9.26	ug/mL	
15) bis(2-chloro-1-methyle...	6.406	121	6251907	9.14	ug/mL	100
16) 3+4-Methylphenol	6.562	108	15424504	9.02	ug/mL	99
17) n-Nitroso-di-n-propyla...	6.568	70	10275853	8.22	ug/mL	95
18) Hexachloroethane	6.649	117	6736424	9.16	ug/mL	94
21) Nitrobenzene	6.757	77	15304174	8.46	ug/mL	95
22) Isophorone	7.039	82	30583636	8.76	ug/mL	94
23) 2-Nitrophenol	7.124	139	9390922	9.39	ug/mL	95
24) 2,4-Dimethylphenol	7.182	107	11464391	9.59	ug/mL	92
25) bis(2-Chloroethoxy)met...	7.306	93	18931641	8.84	ug/mL#	96
26) Benzoic acid	7.318	105	8666955	17.67	ug/mL#	86
27) 2,4-Dichlorophenol	7.406	162	14165983	9.80	ug/mL	98
28) 1,2,4-Trichlorobenzene	7.502	180	15903837	9.79	ug/mL	99
29) Naphthalene	7.597	128	48652110	9.22	ug/mL	100
30) alpha-Terpineol	7.619	93	7890376	8.98	ug/mL	95
31) 4-Chloroaniline	7.715	127	7204133m	7.41	ug/mL	
32) Hexachlorobutadiene	7.735	225	8799987	9.81	ug/mL	99
33) 4-Chloro-3-methylphenol	8.262	107	13652715	9.36	ug/mL	94
34) 2-Methylnaphthalene	8.432	142	32597127	9.46	ug/mL	96

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 00401031.D  
 Acq On : 18 Dec 2023 7:15 am  
 Operator : MAH  
 Sample : BNA 10 PPM  
 Misc :  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 18 10:27:58 2023  
 Quant Method : T:\Data1\MSD4\METHODS\2023\BNA-1217.M  
 Quant Title : EPA 8270D / EPA 625.1 - MSD4  
 QLast Update : Mon Dec 18 10:27:44 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev (Min)
35) 1-Methylnaphthalene	8.550	142	31925042	9.47	ug/mL	96
37) Hexachlorocyclopentadiene	8.608	237	6662652	10.82	ug/mL	99
38) 2,4,6-Trichlorophenol	8.776	196	10634023	9.92	ug/mL	99
39) 2,4,5-Trichlorophenol	8.816	196	11311482	10.01	ug/mL	100
41) 2-Chloronaphthalene	9.024	127	11429635	9.12	ug/mL	96
42) 2-Nitroaniline	9.172	65	7372096	8.92	ug/mL#	82
43) 1,4-Dinitrobenzene	9.358	168	5504419	10.14	ug/mL	96
44) Dimethyl phthalate	9.405	163	35632011	9.47	ug/mL	100
45) 2,6-Dinitrotoluene	9.477	165	9066507	9.91	ug/mL#	87
46) Acenaphthythylene	9.528	152	48666721	9.34	ug/mL	99
47) 1,3-Dinitrobenzene	9.442	168	6492427	10.08	ug/mL	92
48) 1,2-Dinitrobenzene	9.539	168	4379567	9.92	ug/mL	90
50) Acenaphthene	9.740	153	31403749	9.29	ug/mL	99
51) 2,4-Dinitrophenol	9.800	184	3393998	10.87	ug/mL#	84
52) 4-Nitrophenol	9.887	65	4275548	8.74	ug/mL	98
53) 2,4-Dinitrotoluene	9.960	165	11022412	10.08	ug/mL	93
54) Dibenzofuran	9.951	168	43782287	9.32	ug/mL	96
55) 2,3,5,6-tetrachlorophenol	10.047	232	9423042	10.64	ug/mL	93
56) 2,3,4,6-Tetrachlorophenol	10.099	232	9688514	10.48	ug/mL	91
57) Diethyl phthalate	10.263	149	33616055	9.41	ug/mL	99
58) Fluorene	10.370	166	35518393	9.44	ug/mL	100
59) 4-Chlorophenyl-phenyle...	10.384	204	18361115	9.70	ug/mL	97
60) 4-Nitroaniline	10.432	138	6291868m	10.42	ug/mL	
62) 4,6-Dinitro-2-methylph...	10.446	198	5465753	10.94	ug/mL#	85
63) n-Nitrosodiphenylamine	10.538	169	28995338	9.29	ug/mL	99
64) 1,2-Diphenyl hydrazine	10.579	77	29852320	8.22	ug/mL	96
66) 4-Bromophenyl-phenylether	10.981	248	11771374	9.90	ug/mL	94
67) Hexachlorobenzene	11.021	284	13811468	10.07	ug/mL#	91
68) Pentachlorophenol	11.276	266	7206416	10.93	ug/mL	99
69) Phenanthrene	11.546	178	50699161	9.36	ug/mL	99
70) Anthracene	11.608	178	51416817	9.49	ug/mL	98
71) Carbazole	11.830	167	36287244m	12.28	ug/mL	
72) Di-n-butyl phthalate	12.265	149	54743690	9.38	ug/mL	98
73) Fluoranthene	12.996	202	53206254	10.19	ug/mL	96
74) Benzidine	13.196	184	6449003	28.01	ug/mL	97
75) Bis(2-ethylhexyl)adipate	14.200	129	21133360	9.65	ug/mL	98
77) Pyrene	13.273	202	54070850	8.92	ug/mL	96
79) Butyl benzyl phthalate	14.103	149	22711906	9.05	ug/mL	90
80) Benzo[a]anthracene	14.740	228	46998386	9.66	ug/mL	97
81) 3,3'-Dichlorobenzidine	14.737	252	13593360	15.15	ug/mL#	97
82) Chrysene	14.786	228	43628934	9.76	ug/mL	97
83) Bis(2-ethylhexyl)phtha...	14.801	149	31666755	9.19	ug/mL	98
85) Di-n-octyl phthalate	15.561	149	49985938	8.77	ug/mL#	93
86) Benzo[b]fluoranthene	15.963	252	44030428	10.21	ug/mL	95
87) Benzo[k]fluoranthene	15.995	252	45314795	9.90	ug/mL	99
88) Benzo[a]pyrene	16.314	252	36980132	10.36	ug/mL	97
89) Indeno[1,2,3-cd]pyrene	17.668	276	45480486	11.90	ug/mL	100
90) Dibenz[a,h]anthracene	17.698	278	37432981	11.88	ug/mL	99
91) Benzo[ghi]perylene	18.044	276	36539502	12.14	ug/mL	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 03101032.D  
 Acq On : 18 Dec 2023 7:42 am  
 Operator : MAH  
 Sample : BDL0119-BS1  
 Misc :  
 AIS Vial : 31 Sample Multiplier: 1

Quant Time: Dec 18 11:29:10 2023  
 Quant Method : T:\Data1\MSD4\METHODS\2023\BNA-1217.M  
 Quant Title : EPA 8270D / EPA 625.1 - MSD4  
 QLast Update : Mon Dec 18 10:44:19 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
<b>Internal Standards</b>						
1) 1,4-Dichlorobenzene-d4	6.086	150	27006471	20.00	ug/mL	0.00
19) Naphthalene-d8	7.569	136	63386274	20.00	ug/mL	0.00
36) Acenaphthene-d10	9.697	164	37087954	20.00	ug/mL	0.00
61) Phenanthrene-d10	11.514	188	61633370	20.00	ug/mL	0.00
76) Chrysene-d12	14.750	240	50143911	20.00	ug/mL	-0.01
84) Perylene-d12	16.376	264	51521758	20.00	ug/mL	0.00
<b>System Monitoring Compounds</b>						
3) 2-Fluorophenol	4.706	112	46512097	43.77	ug/mL	0.10
Spiked Amount	50.000		Recovery	=	87.54%	
4) Phenol-d5	5.693	99	59734995	46.39	ug/mL	0.01
Spiked Amount	50.000		Recovery	=	92.78%	
20) Nitrobenzene-d5	6.732	82	27276783	20.45	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	81.80%	
40) 2-Fluorobiphenyl	8.886	172	56139271	24.97	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	99.88%	
65) 2,4,6-Tribromophenol	10.665	332	21075579	47.37	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	94.74%	
78) Terphenyl-d14	13.486	244	60613798	23.87	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	95.48%	
<b>Target Compounds</b>						
2) Nitrosodimethylamine	3.154	74	1305898m	1.82	ug/mL	
5) Pyridine	3.195	79	1222462m	1.23	ug/mL	
7) Phenol	5.706	94	3718207	2.64	ug/mL#	25
8) bis(2-Chloroethyl)ether	5.806	63	1509214	2.02	ug/mL	97
9) 2-Chlorophenol	5.850	128	2841661	2.11	ug/mL	97
10) 1,3-Dichlorobenzene	6.015	146	2637594	1.88	ug/mL	94
11) 1,4-Dichlorobenzene	6.104	146	2700246	1.88	ug/mL	98
12) Benzyl alcohol	6.272	79	1341018m	1.54	ug/mL	
13) 1,2-Dichlorobenzene	6.268	146	2638769	1.95	ug/mL	100
14) 2-Methylphenol	6.383	107	2275518	2.31	ug/mL#	55
15) bis(2-chloro-1-methyle...	6.404	121	945115	1.99	ug/mL	100
16) 3+4-Methylphenol	6.563	108	2543483	2.16	ug/mL	98
17) n-Nitroso-di-n-propyla...	6.557	70	1682790	2.02	ug/mL	97
18) Hexachloroethane	6.650	117	919152	1.80	ug/mL	94
21) Nitrobenzene	6.752	77	2468285	1.88	ug/mL	96
22) Isophorone	7.031	82	5209816	2.06	ug/mL	96
23) 2-Nitrophenol	7.120	139	1285981m	1.69	ug/mL	
24) 2,4-Dimethylphenol	7.183	107	2238744	2.56	ug/mL	91
25) bis(2-Chloroethoxy)met...	7.302	93	3114811	2.00	ug/mL	99
27) 2,4-Dichlorophenol	7.408	162	2177200	1.98	ug/mL	98
28) 1,2,4-Trichlorobenzene	7.499	180	2421389	1.95	ug/mL	99
29) Naphthalene	7.593	128	7978549	2.01	ug/mL	99
31) 4-Chloroaniline	7.683	127	454334m	0.54	ug/mL	
32) Hexachlorobutadiene	7.729	225	1342114m	1.95	ug/mL	
33) 4-Chloro-3-methylphenol	8.266	107	2150403	2.00	ug/mL	95
34) 2-Methylnaphthalene	8.429	142	5466747	2.11	ug/mL	94
35) 1-Methylnaphthalene	8.547	142	5266187	2.08	ug/mL	95
37) Hexachlorocyclopentadiene	8.606	237	1061022	2.25	ug/mL	99
38) 2,4,6-Trichlorophenol	8.775	196	1570177	2.00	ug/mL	99

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 03101032.D  
 Acq On : 18 Dec 2023 7:42 am  
 Operator : MAH  
 Sample : BDL0119-BS1  
 Misc :  
 ALS Vial : 31 Sample Multiplier: 1

Quant Time: Dec 18 11:29:10 2023  
 Quant Method : T:\Data1\MSD4\METHODS\2023\BNA-1217.M  
 Quant Title : EPA 8270D / EPA 625.1 - MSD4  
 Last Update : Mon Dec 18 10:44:19 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
39) 2,4,5-Trichlorophenol	8.821	196	1700364	2.06	ug/mL	98
41) 2-Chloronaphthalene	9.019	127	1807936	2.05	ug/mL	96
42) 2-Nitroaniline	9.159	65	1157156m	2.00	ug/mL	
43) 1,4-Dinitrobenzene	9.348	168	681845m	1.73	ug/mL	
44) Dimethyl phthalate	9.392	163	5898568	2.18	ug/mL	99
45) 2,6-Dinitrotoluene	9.467	165	1425624	2.14	ug/mL#	87
46) Acenaphthythylene	9.522	152	7720335	2.08	ug/mL	98
47) 1,3-Dinitrobenzene	9.427	168	893863m	1.90	ug/mL	
48) 1,2-Dinitrobenzene	9.525	168	637880	1.97	ug/mL#	21
49) 3-Nitroaniline	9.667	65	931559m	2.23	ug/mL	
50) Acenaphthene	9.733	153	5300272	2.19	ug/mL	98
51) 2,4-Dinitrophenol	9.796	184	49045m	0.28	ug/mL	
52) 4-Nitrophenol	9.897	65	627991m	2.02	ug/mL	
53) 2,4-Dinitrotoluene	9.950	165	1631511	2.03	ug/mL	100
54) Dibenzofuran	9.946	168	7377923	2.19	ug/mL	99
55) 2,3,5,6-tetrachlorophenol	10.044	232	904354	1.37	ug/mL#	78
56) 2,3,4,6-Tetrachlorophenol	10.097	232	1150326	1.67	ug/mL	92
57) Diethyl phthalate	10.255	149	5811841	2.28	ug/mL	99
58) Fluorene	10.365	166	6059644	2.23	ug/mL	99
59) 4-Chlorophenyl-phenyle...	10.380	204	3093397	2.24	ug/mL	95
60) 4-Nitroaniline	10.409	138	987690m	2.09	ug/mL	
62) 4,6-Dinitro-2-methylph...	10.437	198	458933	1.47	ug/mL#	57
63) n-Nitrosodiphenylamine	10.530	169	5147152	2.34	ug/mL	98
64) 1,2-Diphenyl hydrazine	10.572	77	4882564	2.04	ug/mL	95
66) 4-Bromophenyl-phenylether	10.978	248	1873726	2.22	ug/mL#	92
67) Hexachlorobenzene	11.016	284	2185279	2.22	ug/mL	97
68) Pentachlorophenol	11.281	266	592304	1.34	ug/mL	99
69) Phenanthrene	11.540	178	8599246	2.27	ug/mL	98
70) Anthracene	11.603	178	8476807	2.23	ug/mL	97
71) Carbazole	11.816	167	7434092	3.29	ug/mL#	88
72) Di-n-butyl phthalate	12.262	149	10036151	2.49	ug/mL	98
73) Fluoranthene	12.992	202	8924181	2.39	ug/mL	96
75) Bis(2-ethylhexyl)adipate	14.196	129	3447667	2.25	ug/mL	97
77) Pyrene	13.267	202	9112371	2.12	ug/mL	96
79) Butyl benzyl phthalate	14.099	149	3692942	2.12	ug/mL	91
80) Benzo[a]anthracene	14.735	228	8182095	2.31	ug/mL	96
81) 3,3'-Dichlorobenzidine	14.729	252	3086289	4.73	ug/mL	99
82) Chrysene	14.778	228	7408198	2.27	ug/mL#	90
83) Bis(2-ethylhexyl)phtha...	14.798	149	5229444	2.15	ug/mL	100
85) Di-n-octyl phthalate	15.558	149	7766995	2.10	ug/mL#	95
86) Benzo[b]fluoranthene	15.957	252	7071178	2.32	ug/mL	96
87) Benzo[k]fluoranthene	15.988	252	7487888	2.37	ug/mL	100
88) Benzo[a]pyrene	16.307	252	5564246	2.19	ug/mL	98
89) Indeno[1,2,3-cd]pyrene	17.657	276	6421051	2.34	ug/mL	100
90) Dibenz[a,h]anthracene	17.686	278	5479485	2.43	ug/mL	99
91) Benzo[ghi]perylene	18.028	276	5545682	2.53	ug/mL	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 03201033.D  
 Acq On : 18 Dec 2023 8:10 am  
 Operator : MAH  
 Sample : BDL0119-BSD1  
 Misc :  
 ALS Vial : 32 Sample Multiplier: 1

Quant Time: Dec 18 11:32:16 2023  
 Quant Method : T:\Data1\MSD4\METHODS\2023\BNA-1217.M  
 Quant Title : EPA 8270D / EPA 625.1 - MSD4  
 QLast Update : Mon Dec 18 10:44:19 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev (Min)
<b>Internal Standards</b>						
1) 1,4-Dichlorobenzene-d4	6.085	150	26343353	20.00	ug/mL	0.00
19) Naphthalene-d8	7.569	136	61974344	20.00	ug/mL	0.00
36) Acenaphthene-d10	9.697	164	36462460	20.00	ug/mL	0.00
61) Phenanthrene-d10	11.514	188	60248698	20.00	ug/mL	0.00
76) Chrysene-d12	14.748	240	44706828	20.00	ug/mL	-0.01
84) Perylene-d12	16.374	264	41379939	20.00	ug/mL	-0.01
<b>System Monitoring Compounds</b>						
3) 2-Fluorophenol	4.701	112	47580176	45.90	ug/mL	0.09
Spiked Amount	50.000		Recovery	=	91.80%	
4) Phenol-d5	5.689	99	59850093	47.65	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	95.30%	
20) Nitrobenzene-d5	6.732	82	27792048	21.31	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	85.24%	
40) 2-Fluorobiphenyl	8.886	172	56807660	25.70	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	102.80%	
65) 2,4,6-Tribromophenol	10.665	332	21120867	48.56	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	97.12%	
78) Terphenyl-d14	13.485	244	58638639	25.90	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	103.60%	
<b>Target Compounds</b>						
2) Nitrosodimethylamine	3.135	74	1415510m	2.02	ug/mL	
5) Pyridine	3.186	79	1289642m	1.33	ug/mL	
6) Aniline	5.728	93	376790m	0.32	ug/mL	
7) Phenol	5.702	94	3782411	2.75	ug/mL#	24
8) bis(2-Chloroethyl)ether	5.805	63	1526590	2.09	ug/mL	98
9) 2-Chlorophenol	5.847	128	2858411	2.18	ug/mL	98
10) 1,3-Dichlorobenzene	6.013	146	2591109	1.89	ug/mL	93
11) 1,4-Dichlorobenzene	6.101	146	2630084m	1.88	ug/mL	
13) 1,2-Dichlorobenzene	6.267	146	2624456	1.98	ug/mL	100
14) 2-Methylphenol	6.381	107	2051532	2.14	ug/mL#	58
15) bis(2-chloro-1-methyle...	6.401	121	967879	2.09	ug/mL	100
16) 3+4-Methylphenol	6.564	108	2804148	2.44	ug/mL	97
17) n-Nitroso-di-n-propyla...	6.556	70	1747228	2.15	ug/mL	97
18) Hexachloroethane	6.649	117	924757	1.86	ug/mL	95
21) Nitrobenzene	6.752	77	2519300m	1.96	ug/mL	
22) Isophorone	7.030	82	5240871	2.12	ug/mL	96
23) 2-Nitrophenol	7.121	139	1090841	1.46	ug/mL	94
24) 2,4-Dimethylphenol	7.185	107	2240664	2.62	ug/mL	90
25) bis(2-Chloroethoxy)met...	7.302	93	3161289	2.07	ug/mL	98
27) 2,4-Dichlorophenol	7.407	162	2180366	2.03	ug/mL	98
28) 1,2,4-Trichlorobenzene	7.499	180	2405119	1.98	ug/mL	99
29) Naphthalene	7.593	128	8059483	2.08	ug/mL	99
31) 4-Chloroaniline	7.679	127	847602m	1.03	ug/mL	
32) Hexachlorobutadiene	7.733	225	1340804	2.00	ug/mL	99
33) 4-Chloro-3-methylphenol	8.277	107	2063443	1.96	ug/mL	96
34) 2-Methylnaphthalene	8.429	142	5534942	2.18	ug/mL	94
35) 1-Methylnaphthalene	8.546	142	5301870	2.14	ug/mL	95
37) Hexachlorocyclopentadiene	8.606	237	1029649	2.23	ug/mL	98
38) 2,4,6-Trichlorophenol	8.778	196	1381553	1.79	ug/mL	99

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 03201033.D  
 Acq On : 18 Dec 2023 8:10 am  
 Operator : MAH  
 Sample : BDL0119-BSD1  
 Misc :  
 ALS Vial : 32 Sample Multiplier: 1

Quant Time: Dec 18 11:32:16 2023  
 Quant Method : T:\Data1\MSD4\METHODS\2023\BNA-1217.M  
 Quant Title : EPA 8270D / EPA 625.1 - MSD4  
 Last Update : Mon Dec 18 10:44:19 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
39) 2,4,5-Trichlorophenol	8.831	196	1719139	2.12	ug/mL	99
41) 2-Chloronaphthalene	9.019	127	1842763	2.12	ug/mL	97
42) 2-Nitroaniline	9.163	65	1114462	1.96	ug/mL#	83
43) 1,4-Dinitrobenzene	9.351	168	655068	1.69	ug/mL	98
44) Dimethyl phthalate	9.392	163	5910327	2.22	ug/mL	100
45) 2,6-Dinitrotoluene	9.467	165	1410470	2.15	ug/mL#	88
46) Acenaphthylene	9.522	152	7773483	2.13	ug/mL	98
47) 1,3-Dinitrobenzene	9.431	168	871704m	1.88	ug/mL	
48) 1,2-Dinitrobenzene	9.525	168	632432	1.99	ug/mL#	1
49) 3-Nitroaniline	9.670	65	841946	2.05	ug/mL#	76
50) Acenaphthene	9.733	153	5343999	2.25	ug/mL	98
51) 2,4-Dinitrophenol	9.805	184	18399	0.11	ug/mL#	34
52) 4-Nitrophenol	9.948	65	384244m	1.26	ug/mL	
53) 2,4-Dinitrotoluene	9.951	165	1577330	2.00	ug/mL	95
54) Dibenzofuran	9.946	168	7362218	2.22	ug/mL	97
55) 2,3,5,6-tetrachlorophenol	10.045	232	679868m	1.05	ug/mL	
56) 2,3,4,6-Tetrachlorophenol	10.100	232	927128m	1.37	ug/mL	
57) Diethyl phthalate	10.255	149	5817307	2.32	ug/mL	99
58) Fluorène	10.365	166	6043680	2.26	ug/mL	99
59) 4-Chlorophenyl-phenyle...	10.380	204	3083545	2.28	ug/mL	96
60) 4-Nitroaniline	10.414	138	1030237m	2.22	ug/mL	
62) 4,6-Dinitro-2-methylph...	10.438	198	376557	1.24	ug/mL#	57
63) n-Nitrosodiphenylamine	10.530	169	5189930	2.41	ug/mL	98
64) 1,2-Diphenyl hydrazine	10.572	77	4850422	2.08	ug/mL	96
66) 4-Bromophenyl-phenylether	10.977	248	1884383	2.29	ug/mL#	92
67) Hexachlorobenzene	11.016	284	2174690	2.26	ug/mL	94
68) Pentachlorophenol	11.309	266	448327m	1.04	ug/mL	
69) Phenanthrene	11.540	178	8510232	2.29	ug/mL	97
70) Anthracene	11.602	178	8373872	2.25	ug/mL	97
71) Carbazole	11.816	167	7174634	3.25	ug/mL#	87
72) Di-n-butyl phthalate	12.262	149	9826754	2.49	ug/mL	98
73) Fluoranthene	12.992	202	8632532	2.36	ug/mL	96
75) Bis(2-ethylhexyl)adipate	14.196	129	3259129	2.18	ug/mL	98
77) Pyrene	13.268	202	8703033	2.27	ug/mL	97
79) Butyl benzyl phthalate	14.099	149	3439032	2.21	ug/mL	92
80) Benzo[a]anthracene	14.735	228	7344800	2.32	ug/mL	96
81) 3,3'-Dichlorobenzidine	14.731	252	2383134	4.10	ug/mL#	97
82) Chrysene	14.777	228	6559811	2.25	ug/mL#	90
83) Bis(2-ethylhexyl)phtha...	14.798	149	4880190	2.25	ug/mL	99
85) Di-n-octyl phthalate	15.558	149	6837069	2.30	ug/mL#	95
86) Benzo[b]fluoranthene	15.986	252	5985796	2.44	ug/mL	96
87) Benzo[k]fluoranthene	15.987	252	6150922	2.42	ug/mL	99
88) Benzo[a]pyrene	16.307	252	4449281	2.18	ug/mL	99
89) Indeno[1,2,3-cd]pyrene	17.655	276	4624942	2.09	ug/mL	100
90) Dibenz[a,h]anthracene	17.687	278	3921935	2.16	ug/mL	99
91) Benzo[ghi]perylene	18.027	276	3949221	2.24	ug/mL	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 03301034.D  
 Acq On : 18 Dec 2023 8:37 am  
 Operator : MAH  
 Sample : BDL0119-BLK1  
 Misc :  
 ALS Vial : 33 Sample Multiplier: 1

Quant Time: Dec 18 11:26:34 2023  
 Quant Method : T:\Data1\MSD4\METHODS\2023\BNA-1217.M  
 Quant Title : EPA 8270D / EPA 625.1 - MSD4  
 QLast Update : Mon Dec 18 10:44:19 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
<b>Internal Standards</b>						
1) 1,4-Dichlorobenzene-d4	6.087	150	25663113	20.00	ug/mL	0.00
19) Naphthalene-d8	7.570	136	59657289	20.00	ug/mL	0.00
36) Acenaphthene-d10	9.697	164	34764761	20.00	ug/mL	0.00
61) Phenanthrene-d10	11.514	188	57791152	20.00	ug/mL	0.00
76) Chrysene-d12	14.748	240	44782711	20.00	ug/mL	-0.01
84) Perylene-d12	16.375	264	43031619	20.00	ug/mL	-0.01
<b>System Monitoring Compounds</b>						
3) 2-Fluorophenol	4.713	112	44049611	43.62	ug/mL	0.10
Spiked Amount	50.000		Recovery	=	87.24%	
4) Phenol-d5	5.693	99	57208053	46.75	ug/mL	0.01
Spiked Amount	50.000		Recovery	=	93.50%	
20) Nitrobenzene-d5	6.733	82	26167760	20.85	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	83.40%	
40) 2-Fluorobiphenyl	8.886	172	52468875	24.90	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	99.60%	
65) 2,4,6-Tribromophenol	10.664	332	18201580	43.63	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	87.26%	
78) Terphenyl-d14	13.486	244	57593748	25.40	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	101.60%	
<b>Target Compounds</b>						
7) Phenol	5.706	94	537956	0.40	ug/mL#	1

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 03401035.D  
 Acq On : 18 Dec 2023 9:04 am  
 Operator : MAH  
 Sample : MDK0690-01  
 Misc :  
 ALS Vial : 34 Sample Multiplier: 1

Quant Time: Dec 18 14:24:06 2023  
 Quant Title :  
 Last Update : Mon Dec 18 10:44:19 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
<b>Internal Standards</b>							
1) 1,4-Dichlorobenzene-d4	6.083	150	24925685	20.00	ug/mL	0.00	
19) Naphthalene-d8	7.572	136	54492368	20.00	ug/mL	0.00	
36) Acenaphthene-d10	9.700	164	35505538	20.00	ug/mL	0.00	
61) Phenanthrene-d10	11.523	188	55240532	20.00	ug/mL	0.00	
76) Chrysene-d12	14.902	240	37868311m	20.00	ug/mL	0.14	
84) Perylene-d12	16.433	264	37321606	20.00	ug/mL	0.05	
<b>System Monitoring Compounds</b>							
3) 2-Fluorophenol	4.713	112	48902433m	49.86	ug/mL	0.10	
Spiked Amount	50.000		Recovery	=	99.72%		
4) Phenol-d5	5.717	99	61238044	51.53	ug/mL	0.04	
Spiked Amount	50.000		Recovery	=	103.06%		
20) Nitrobenzene-d5	6.734	82	22838090	19.92	ug/mL	0.00	
Spiked Amount	25.000		Recovery	=	79.68%		
40) 2-Fluorobiphenyl	8.888	172	46455665	21.58	ug/mL	0.00	
Spiked Amount	25.000		Recovery	=	86.32%		
65) 2,4,6-Tribromophenol	10.677	332	21008751	52.68	ug/mL	0.00	
Spiked Amount	50.000		Recovery	=	105.36%		
78) Terphenyl-d14	13.532	244	632004	0.33	ug/mL	0.04	
Spiked Amount	25.000		Recovery	=	1.32%		
<b>Target Compounds</b>							
6) Aniline	5.734	93	5977858	5.44	ug/mL		96
7) Phenol	5.732	94	2144529m	1.65	ug/mL		
16) 3+4-Methylphenol	6.583	108	1462322	1.34	ug/mL		88
26) Benzoic acid	7.443	105	4351324m	15.51	ug/mL		
45) 2,6-Dinitrotoluene	9.435	165	109769	0.17	ug/mL#		34
81) 3,3'-Dichlorobenzidine	14.729	252	146208	0.30	ug/mL#		1
83) Bis(2-ethylhexyl)phtha...	14.892	149	3552558	1.93	ug/mL		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2023\DEC\17\  
 Data File : 03501036.D  
 Acq On : 18 Dec 2023 9:32 am  
 Operator : MAH  
 Sample : MDK0690-01  
 Misc : 10X  
 ALS Vial : 35 Sample Multiplier: 1

Quant Time: Dec 18 14:12:14 2023  
 Quant Method : T:\Data1\MSD4\METHODS\2023\BNA-1217.M  
 Quant Title : EPA 8270D / EPA 625.1 - MSD4  
 QLast Update : Mon Dec 18 10:44:19 2023  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	6.083	150	34476624	20.00	ug/mL	0.00
19) Naphthalene-d8	7.578	136	80147395	20.00	ug/mL	0.00
36) Acenaphthene-d10	9.707	164	49603640	20.00	ug/mL	0.00
61) Phenanthrene-d10	11.528	188	84678522	20.00	ug/mL	0.00
76) Chrysene-d12	14.780	240	58809904	20.00	ug/mL	0.02
84) Perylene-d12	16.399	264	53090466	20.00	ug/mL	0.01
System Monitoring Compounds						
3) 2-Fluorophenol	4.644	112	58390475	43.04	ug/mL	0.03
Spiked Amount	50.000		Recovery	=	86.08%	
4) Phenol-d5	5.699	99	75641506	46.02	ug/mL	0.02
Spiked Amount	50.000		Recovery	=	92.04%	
20) Nitrobenzene-d5	6.739	82	33214595	19.70	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	78.80%	
40) 2-Fluorobiphenyl	8.893	172	66031730	21.96	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	87.84%	
65) 2,4,6-Tribromophenol	10.682	332	28360752	46.40	ug/mL	0.00
Spiked Amount	50.000		Recovery	=	92.80%	
78) Terphenyl-d14	13.519	244	66723373	22.40	ug/mL	0.03
Spiked Amount	25.000		Recovery	=	89.60%	
Target Compounds						
26) Benzoic acid	7.356	105	495276m	1.51	ug/mL	Qvalue
83) Bis(2-ethylhexyl)phtha...	14.821	149	529502	0.19	ug/mL	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

## ====8330 Batch Table====

Vial#	Sample Name	Sample ID	Sample Type	Method File	Data File	Level#	Report Format File
1	1000 ppb ICAL		1:Standard:(I)	iods\8330_50B_28C_final.lcm	1000 ppb ICAL_12222023_001.lcd	6	330_batch_file_report.lsr
2	800 ppb ICAL		1:Standard:(R)	iods\8330_50B_28C_final.lcm	800 ppb ICAL_12222023_002.lcd	5	330_batch_file_report.lsr
3	600 ppb ICAL		1:Standard:(R)	iods\8330_50B_28C_final.lcm	600 ppb ICAL_12222023_003.lcd	4	330_batch_file_report.lsr
4	400 ppb ICAL		1:Standard:(R)	iods\8330_50B_28C_final.lcm	400 ppb ICAL_12222023_004.lcd	3	330_batch_file_report.lsr
5	100 ppb ICAL		1:Standard:(R)	iods\8330_50B_28C_final.lcm	100 ppb ICAL_12222023_005.lcd	2	330_batch_file_report.lsr
6	50 ppb ICAL		1:Standard:(R)	iods\8330_50B_28C_final.lcm	50 ppb ICAL_12222023_006.lcd	1	330_batch_file_report.lsr
7	RB		0:Unknown	iods\8330_50B_28C_final.lcm	RB_12222023_007.lcd	0	330_batch_file_report.lsr
8	ICV		0:Unknown	iods\8330_50B_28C_final.lcm	ICV_12222023_008.lcd	0	330_batch_file_report.lsr
9	BDK1089-BLK1		0:Unknown	iods\8330_50B_28C_final.lcm	BDK1089-BLK1_12222023_009.lcd	0	330_batch_file_report.lsr
10	BDK1089-BS1		0:Unknown	iods\8330_50B_28C_final.lcm	BDK1089-BS1_12222023_010.lcd	0	330_batch_file_report.lsr
11	BDK1089-MS1		0:Unknown	iods\8330_50B_28C_final.lcm	BDK1089-MS1_12222023_011.lcd	0	330_batch_file_report.lsr
12	BDK1089-MSD1		0:Unknown	iods\8330_50B_28C_final.lcm	BDK1089-MSD1_12222023_012.lcd	0	330_batch_file_report.lsr
13	MDK0568-01		0:Unknown	iods\8330_50B_28C_final.lcm	MDK0568-01_12222023_013.lcd	0	330_batch_file_report.lsr
14	MDK0568-02		0:Unknown	iods\8330_50B_28C_final.lcm	MDK0568-02_12222023_014.lcd	0	330_batch_file_report.lsr
15	MDK0568-03		0:Unknown	iods\8330_50B_28C_final.lcm	MDK0568-03_12222023_015.lcd	0	330_batch_file_report.lsr
16	MDK0568-04		0:Unknown	iods\8330_50B_28C_final.lcm	MDK0568-04_12222023_016.lcd	0	330_batch_file_report.lsr
17	MDK0568-05		0:Unknown	iods\8330_50B_28C_final.lcm	MDK0568-05_12222023_017.lcd	0	330_batch_file_report.lsr
18	MDK0568-06		0:Unknown	iods\8330_50B_28C_final.lcm	MDK0568-06_12222023_018.lcd	0	330_batch_file_report.lsr
19	MDK0568-07		0:Unknown	iods\8330_50B_28C_final.lcm	MDK0568-07_12222023_019.lcd	0	330_batch_file_report.lsr
20	MDK0568-08		0:Unknown	iods\8330_50B_28C_final.lcm	MDK0568-08_12222023_020.lcd	0	330_batch_file_report.lsr
4	CCV 400 ppb		0:Unknown	iods\8330_50B_28C_final.lcm	CCV 400 ppb_12222023_021.lcd	0	330_batch_file_report.lsr
21	BDK1088-BLK1		0:Unknown	iods\8330_50B_28C_final.lcm	BDK1088-BLK1_12222023_022.lcd	0	330_batch_file_report.lsr
22	BDK1088-BS1		0:Unknown	iods\8330_50B_28C_final.lcm	BDK1088-BS1_12222023_023.lcd	0	330_batch_file_report.lsr
23	BDK1088-MRL1		0:Unknown	iods\8330_50B_28C_final.lcm	BDK1088-MRL1_12222023_024.lcd	0	330_batch_file_report.lsr
24	BDK1088-MRL2		0:Unknown	iods\8330_50B_28C_final.lcm	BDK1088-MRL2_12222023_025.lcd	0	330_batch_file_report.lsr
25	BDK1088-MRL3		0:Unknown	iods\8330_50B_28C_final.lcm	BDK1088-MRL3_12222023_026.lcd	0	330_batch_file_report.lsr
26	BDK1088-MS1		0:Unknown	iods\8330_50B_28C_final.lcm	BDK1088-MS1_12222023_027.lcd	0	330_batch_file_report.lsr
27	BDK1088-MSD1		0:Unknown	iods\8330_50B_28C_final.lcm	BDK1088-MSD1_12222023_028.lcd	0	330_batch_file_report.lsr
28	MDK0709-07		0:Unknown	iods\8330_50B_28C_final.lcm	MDK0709-07_12222023_029.lcd	0	330_batch_file_report.lsr
29	MDK0709-01		0:Unknown	iods\8330_50B_28C_final.lcm	MDK0709-01_12222023_030.lcd	0	330_batch_file_report.lsr
30	MDK0709-02		0:Unknown	iods\8330_50B_28C_final.lcm	MDK0709-02_12222023_031.lcd	0	330_batch_file_report.lsr
31	MDK0709-05		0:Unknown	iods\8330_50B_28C_final.lcm	MDK0709-05_12222023_032.lcd	0	330_batch_file_report.lsr
32	MDK0709-06		0:Unknown	iods\8330_50B_28C_final.lcm	MDK0709-06_12222023_033.lcd	0	330_batch_file_report.lsr
33	MDK0709-08		0:Unknown	iods\8330_50B_28C_final.lcm	MDK0709-08_12222023_034.lcd	0	330_batch_file_report.lsr
34	MDK0709-09		0:Unknown	iods\8330_50B_28C_final.lcm	MDK0709-09_12222023_035.lcd	0	330_batch_file_report.lsr
35	MDK0709-11		0:Unknown	iods\8330_50B_28C_final.lcm	MDK0709-11_12222023_036.lcd	0	330_batch_file_report.lsr
36	MDK0709-12		0:Unknown	iods\8330_50B_28C_final.lcm	MDK0709-12_12222023_037.lcd	0	330_batch_file_report.lsr
37	MDK0709-13		0:Unknown	iods\8330_50B_28C_final.lcm	MDK0709-13_12222023_038.lcd	0	330_batch_file_report.lsr

 12/29/23  
 BDK1089  
 BDK1088

Vial#	Sample Name	Sample ID	Sample Type	Method File	Data File	Level#	Report Format File
4	CCV 400 ppb		0:Unknown	ods\8330_50B_28C_final.lcm	CCV 400 ppb_12222023_039.lcd	0	330_batch_file_report.lsr

Method: 8330B  
 Solvent: Acetonitrile  
 Instrument: HPLC  
 Ext. Method: RDX SPE

Surrogate(s)	Solution #	Concentration (ppm)
1,2-Dinitrobenzene	2303346	1000
Matrix Spiking Info (MS/MSD)		
Matrix Spiking Info (MS/MSD)	Solution #	Concentration (ppm)
EPA 8330 Mix #1	2303409	100
EPA 8330 Mix #2	2303410	100

Sample #	Amount Ext. (g/mL)	Matrix	S (µl)	MS1 (µl)	MS2 (µl)	FV (ml)
BDK1088-BLK1	1000	W	10			10
BDK1088-BS1	1000	W	10	50	50	10
BDK1088-MRL1	1000	W	10	50	50	10
BDK1088-MRL2	1000	W	10	5	5	10
BDK1088-MRL3	1000	W	10	5	5	10
BDK1088-MRL3	1000	W	10	5	5	10
BDK1088-MS1	1000	W	10	50	50	10
BDK1088-MSD1	1000	W	10	50	50	10
MDK0709-07	1000	W	10			10
MDK0709-01	1000	W	10			10
MDK0709-02	1000	W	10			10
MDK0709-05	1000	W	10			10
MDK0709-06	1000	W	10			10
MDK0709-08	1000	W	10			10
MDK0709-09	1000	W	10			10
MDK0709-11	1000	W	10			10
MDK0709-12	1000	W	10			10
MDK0709-13	1000	W	10			10

Reagent/Solution Desc.	Acetonitrile	RDX SPE	MeOH				
Reagent/Solution #	See Element	See Element	See Element				

Comments: \_\_\_\_\_





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## Analysis Report

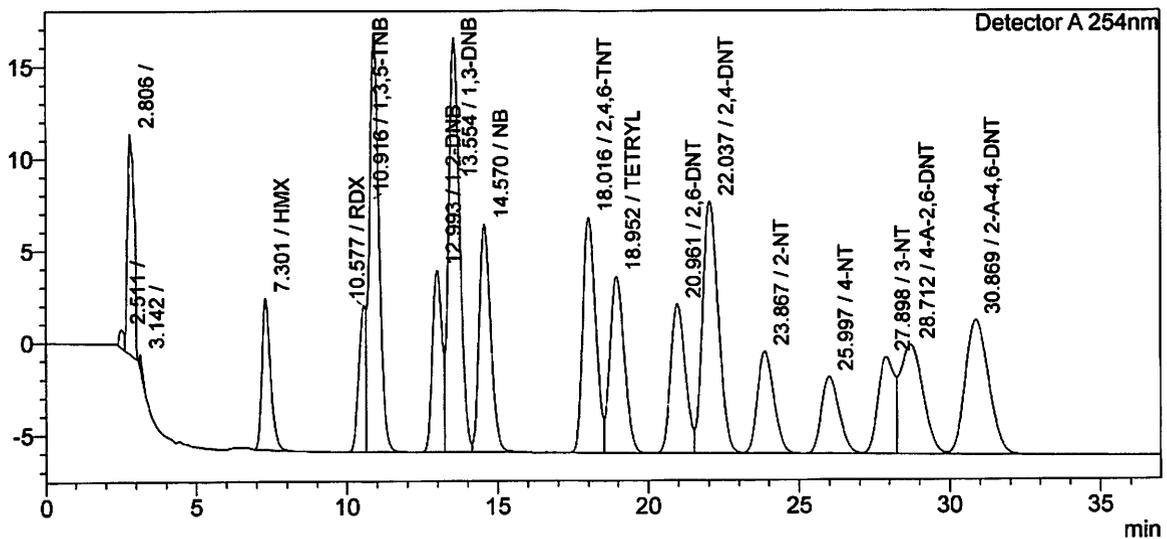
## &lt;Sample Information&gt;

Sample Name : 1000 ppb ICAL  
 Sample ID :  
 Data Filename : 1000 ppb ICAL\_12222023\_001.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122223EXPDR.Tcb  
 Vial # : 1-1  
 Injection Volume : 100 uL  
 Date Acquired : 12/22/2023 9:30:15 AM  
 Date Processed : 12/26/2023 3:04:29 PM

Sample Type : Standard  
 Level : 6  
 Acquired by : System Administrator  
 Processed by : System Administrator

## &lt;Chromatogram&gt;

mV



## &lt;Peak Table&gt;

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
4	HMX	7.301	160906	8207	1000.000	mg/L
5	RDX	10.577	127670	7943	1000.000	mg/L
6	1,3,5-TNB	10.916	502869	22662	1000.000	mg/L
7	1,2-DNB	12.993	218883	9874	1000.000	mg/L
8	1,3-DNB	13.554	572216	22510	1000.000	mg/L
9	NB	14.570	326487	12363	1000.000	mg/L
10	2,4,6-TNT	18.016	379179	12781	1000.000	mg/L
11	TETRYL	18.952	319514	9592	1000.000	mg/L
12	2,6-DNT	20.961	274317	8108	1000.000	mg/L
13	2,4-DNT	22.037	497489	13701	1000.000	mg/L
14	2-NT	23.867	209482	5518	1000.000	mg/L
15	4-NT	25.997	170715	4172	1000.000	mg/L
16	3-NT	27.898	201964	5236	1000.000	mg/L
17	4-A-2,6-DNT	28.712	308983	5933	1000.000	mg/L
18	2-A-4,6-DNT	30.869	392471	7302	1000.000	mg/L
Total			4663146	155901		



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## Analysis Report

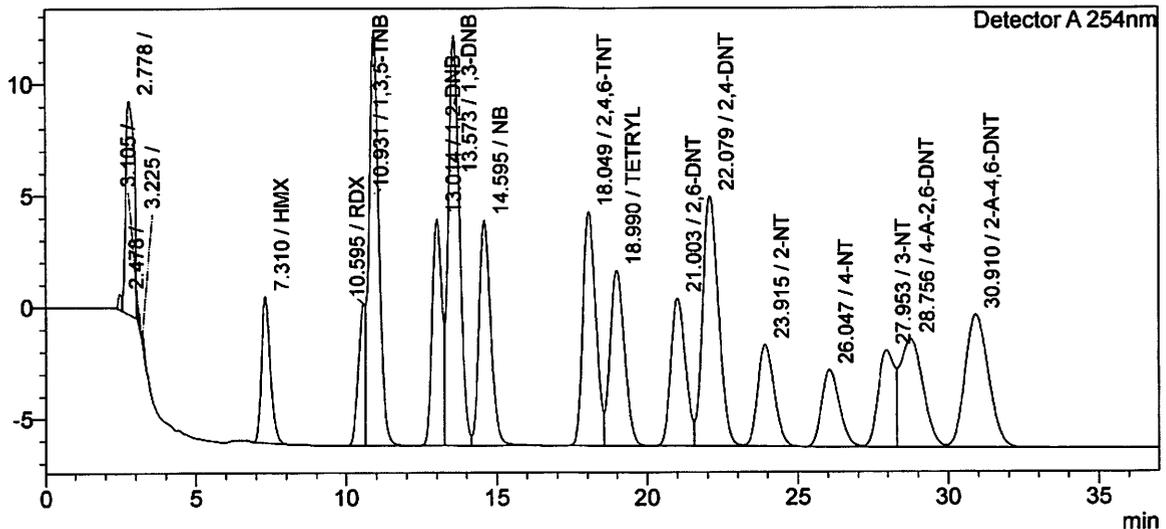
## &lt;Sample Information&gt;

Sample Name : 800 ppb ICAL  
 Sample ID :  
 Data Filename : 800 ppb ICAL\_12222023\_002.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122223EXPDR.Tcb  
 Vial # : 1-2  
 Injection Volume : 100 uL  
 Date Acquired : 12/22/2023 10:07:41 AM  
 Date Processed : 12/26/2023 3:04:31 PM

Sample Type : Standard  
 Level : 5  
 Acquired by : System Administrator  
 Processed by : System Administrator

## &lt;Chromatogram&gt;

mV



## &lt;Peak Table&gt;

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
5	HMX	7.310	132172	6551	812.927	mg/L
6	RDX	10.595	100908	6361	794.108	mg/L
7	1,3,5-TNB	10.931	419460	18505	820.472	mg/L
8	1,2-DNB	13.014	228924	10140	1022.421	mg/L
9	1,3-DNB	13.573	475061	18371	818.155	mg/L
10	NB	14.595	270852	10091	817.788	mg/L
11	2,4,6-TNT	18.049	312056	10481	813.855	mg/L
12	TETRYL	18.990	262777	7854	813.526	mg/L
13	2,6-DNT	21.003	224573	6618	811.277	mg/L
14	2,4-DNT	22.079	409639	11210	814.115	mg/L
15	2-NT	23.915	173946	4561	818.245	mg/L
16	4-NT	26.047	141754	3453	818.240	mg/L
17	3-NT	27.953	168827	4348	821.527	mg/L
18	4-A-2,6-DNT	28.756	253229	4855	811.812	mg/L
19	2-A-4,6-DNT	30.910	323311	5963	814.336	mg/L
Total			3897488	129363		

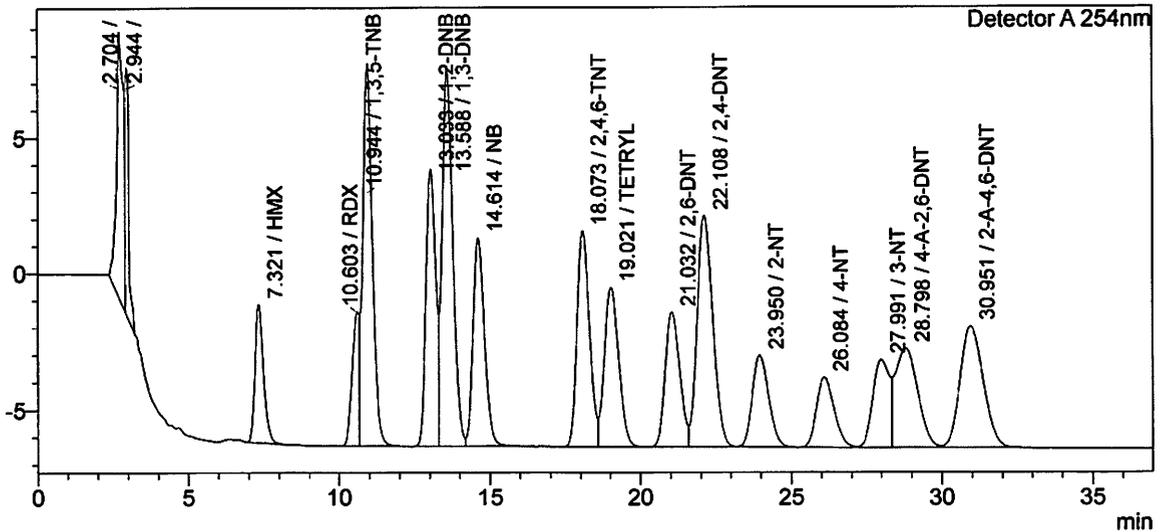
**SHIMADZU**  
**LabSolutions Analysis Report**

**<Sample Information>**

Sample Name : 600 ppb ICAL  
 Sample ID :  
 Data Filename : 600 ppb ICAL\_12222023\_003.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122223EXPDR.Tcb  
 Vial # : 1-3  
 Injection Volume : 100 uL  
 Date Acquired : 12/22/2023 10:45:06 AM  
 Date Processed : 12/26/2023 3:04:33 PM  
 Sample Type : Standard  
 Level : 4  
 Acquired by : System Administrator  
 Processed by : System Administrator

**<Chromatogram>**

mV



**<Peak Table>**

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
3	HMX	7.321	98746	5057	606.004	mg/L
4	RDX	10.603	77781	4890	609.887	mg/L
5	1,3,5-TNB	10.944	309427	13941	604.294	mg/L
6	1,2-DNB	13.033	230519	10161	1019.504	mg/L
7	1,3-DNB	13.588	352922	13938	606.386	mg/L
8	NB	14.614	199308	7596	601.454	mg/L
9	2,4,6-TNT	18.073	232423	7886	605.050	mg/L
10	TETRYL	19.021	193195	5820	598.448	mg/L
11	2,6-DNT	21.032	164462	4903	595.173	mg/L
12	2,4-DNT	22.108	303626	8434	602.807	mg/L
13	2-NT	23.950	126156	3347	594.609	mg/L
14	4-NT	26.084	104076	2549	600.616	mg/L
15	3-NT	27.991	123619	3199	601.266	mg/L
16	4-A-2,6-DNT	28.798	185864	3618	596.593	mg/L
17	2-A-4,6-DNT	30.951	236550	4428	596.557	mg/L
Total			2938672	99766		



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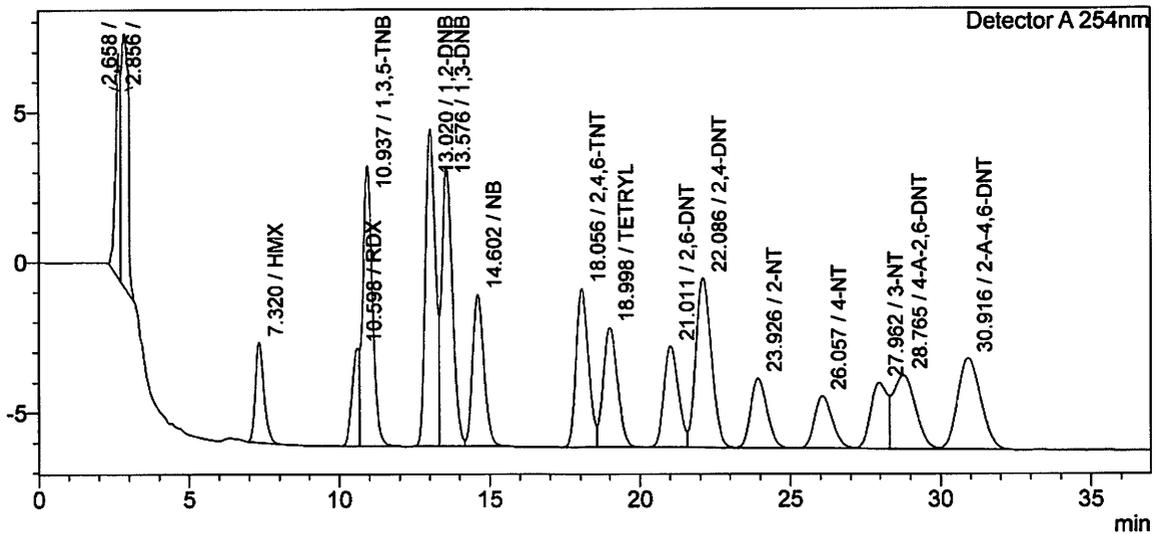
# Analysis Report

## <Sample Information>

Sample Name	: 400 ppb ICAL	Sample Type	: Standard
Sample ID	:	Level	: 3
Data Filename	: 400 ppb ICAL_12222023_004.lcd	Acquired by	: System Administrator
Method Filename	: 8330_50B_28C_final.lcm	Processed by	: System Administrator
Batch Filename	: 122223EXPDR.Tcb		
Vial #	: 1-4		
Injection Volume	: 100 uL		
Date Acquired	: 12/22/2023 11:22:32 AM		
Date Processed	: 12/26/2023 3:04:34 PM		

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
3	HMX	7.320	65665	3327	402.763	mg/L
4	RDX	10.598	52284	3245	409.208	mg/L
5	1,3,5-TNB	10.937	208267	9326	406.228	mg/L
6	1,2-DNB	13.020	243886	10547	1057.832	mg/L
7	1,3-DNB	13.576	237143	9319	406.895	mg/L
8	NB	14.602	132028	5031	398.538	mg/L
9	2,4,6-TNT	18.056	155473	5269	404.376	mg/L
10	TETRYL	18.998	130342	3954	403.472	mg/L
11	2,6-DNT	21.011	112074	3344	405.167	mg/L
12	2,4-DNT	22.086	202554	5618	401.982	mg/L
13	2-NT	23.926	86332	2295	406.389	mg/L
14	4-NT	26.057	70358	1725	405.581	mg/L
15	3-NT	27.962	84612	2175	410.661	mg/L
16	4-A-2,6-DNT	28.765	124203	2435	398.769	mg/L
17	2-A-4,6-DNT	30.916	160696	3007	404.867	mg/L
Total			2065916	70615		



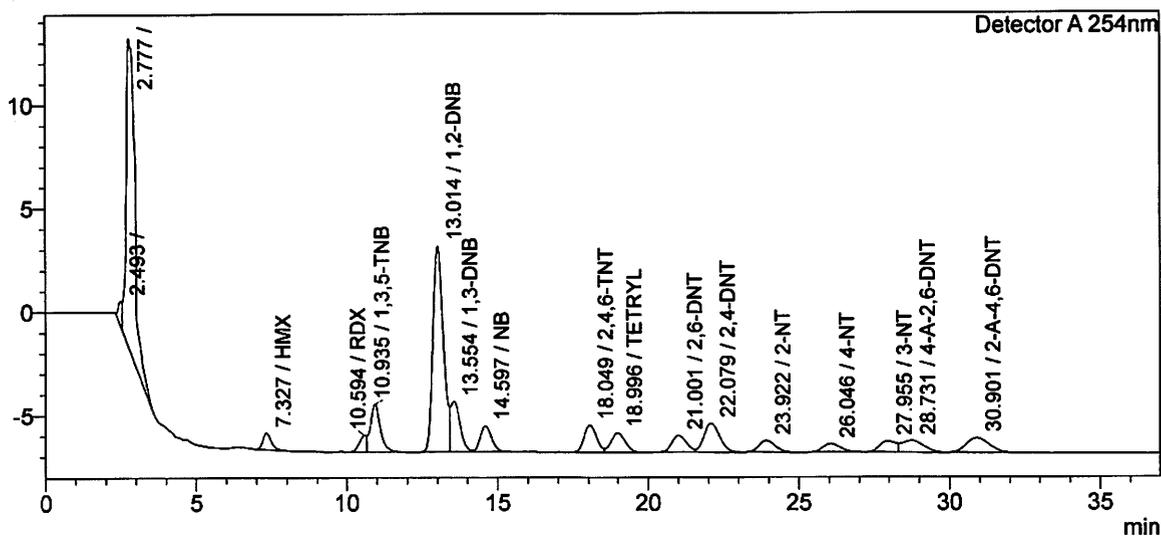
# Analysis Report

## <Sample Information>

Sample Name : 100 ppb ICAL  
 Sample ID :  
 Data Filename : 100 ppb ICAL\_12222023\_005.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122223EXPDR.Tcb  
 Vial # : 1-5  
 Injection Volume : 100 uL  
 Date Acquired : 12/22/2023 11:59:58 AM  
 Date Processed : 12/26/2023 3:04:35 PM  
 Sample Type : Standard  
 Level : 2  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

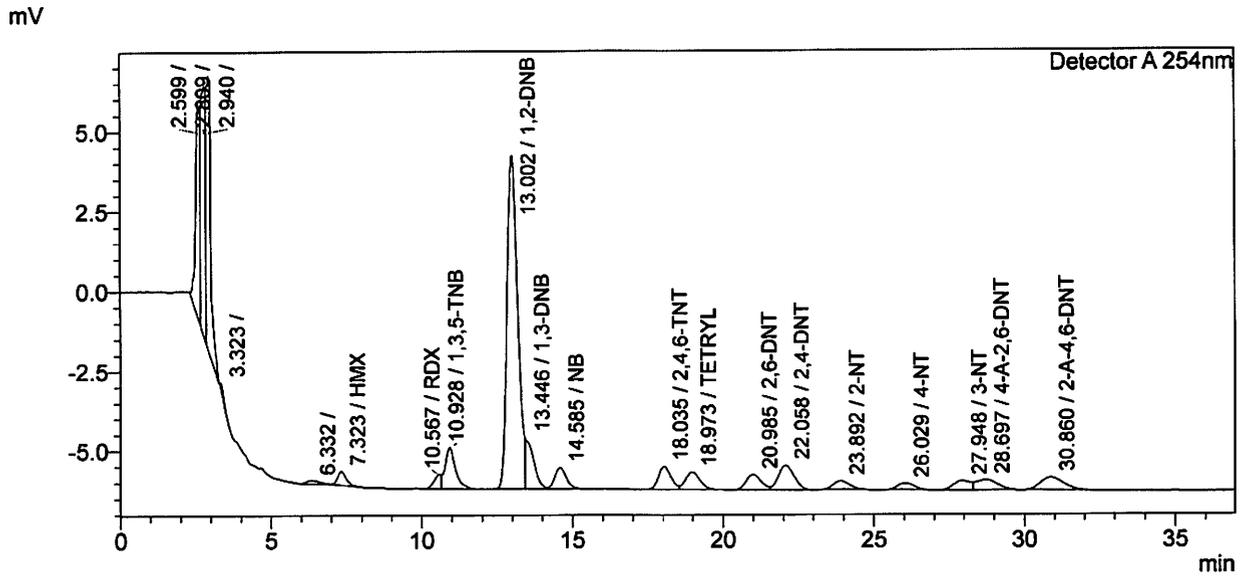
Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
3	HMX	7.327	15817	807	97.026	mg/L
4	RDX	10.594	12909	802	101.032	mg/L
5	1,3,5-TNB	10.935	52745	2289	102.865	mg/L
6	1,2-DNB	13.014	240554	9929	1034.403	mg/L
7	1,3-DNB	13.554	54948	2435	94.306	mg/L
8	NB	14.597	32644	1254	98.544	mg/L
9	2,4,6-TNT	18.049	38094	1302	99.084	mg/L
10	TETRYL	18.996	30407	929	94.151	mg/L
11	2,6-DNT	21.001	26558	795	96.031	mg/L
12	2,4-DNT	22.079	49776	1390	98.789	mg/L
13	2-NT	23.922	20287	551	95.515	mg/L
14	4-NT	26.046	16193	409	93.371	mg/L
15	3-NT	27.955	20049	526	97.318	mg/L
16	4-A-2,6-DNT	28.731	27808	557	89.324	mg/L
17	2-A-4,6-DNT	30.901	36605	705	92.257	mg/L
Total			675391	24680		

**SHIMADZU**  
**LabSolutions Analysis Report**

**<Sample Information>**

Sample Name : 50 ppb ICAL  
 Sample ID :  
 Data Filename : 50 ppb ICAL\_12222023\_006.lcd  
 Method Filename : 8330 50B 28C final.lcm  
 Batch Filename : 122223EXPDR.Tcb  
 Vial # : 1-6  
 Injection Volume : 100 uL  
 Date Acquired : 12/22/2023 12:37:23 PM  
 Date Processed : 12/26/2023 3:04:37 PM  
 Sample Type : Standard  
 Level : 1  
 Acquired by : System Administrator  
 Processed by : System Administrator

**<Chromatogram>**



**<Peak Table>**

Detector A 254nm

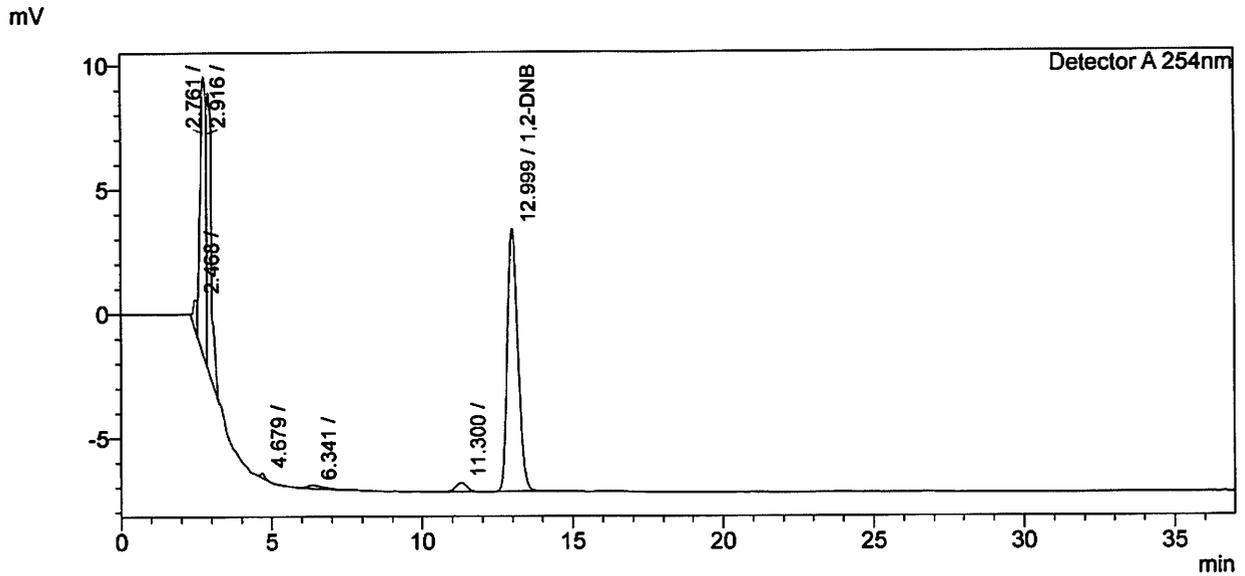
Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
6	HMX	7.323	8662	433	53.130	mg/L
7	RDX	10.567	7289	438	57.038	mg/L
8	1,3,5-TNB	10.928	30778	1278	60.012	mg/L
9	1,2-DNB	13.002	256193	10433	1083.301	mg/L
10	1,3-DNB	13.446	30000	1554	51.487	mg/L
11	NB	14.585	17350	660	52.372	mg/L
12	2,4,6-TNT	18.035	21164	717	55.043	mg/L
13	TETRYL	18.973	17961	541	55.607	mg/L
14	2,6-DNT	20.985	16074	472	58.109	mg/L
15	2,4-DNT	22.058	27401	758	54.376	mg/L
16	2-NT	23.892	9501	263	44.740	mg/L
17	4-NT	26.029	7057	197	40.704	mg/L
18	3-NT	27.948	11210	284	54.408	mg/L
19	4-A-2,6-DNT	28.697	15190	313	48.795	mg/L
20	2-A-4,6-DNT	30.860	20378	389	51.357	mg/L
Total			496208	18730		

**SHIMADZU**  
**LabSolutions** **Analysis Report**

**<Sample Information>**

Sample Name : RB  
 Sample ID :  
 Data Filename : RB\_12222023\_007.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122223EXPDR.Tcb  
 Vial # : 1-7  
 Injection Volume : 100 uL  
 Date Acquired : 12/22/2023 1:14:49 PM  
 Date Processed : 12/26/2023 3:04:38 PM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

**<Chromatogram>**



**<Peak Table>**

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
7	1,2-DNB	12.999	257583	10565	1089.179	mg/L
Total			257583	10565		



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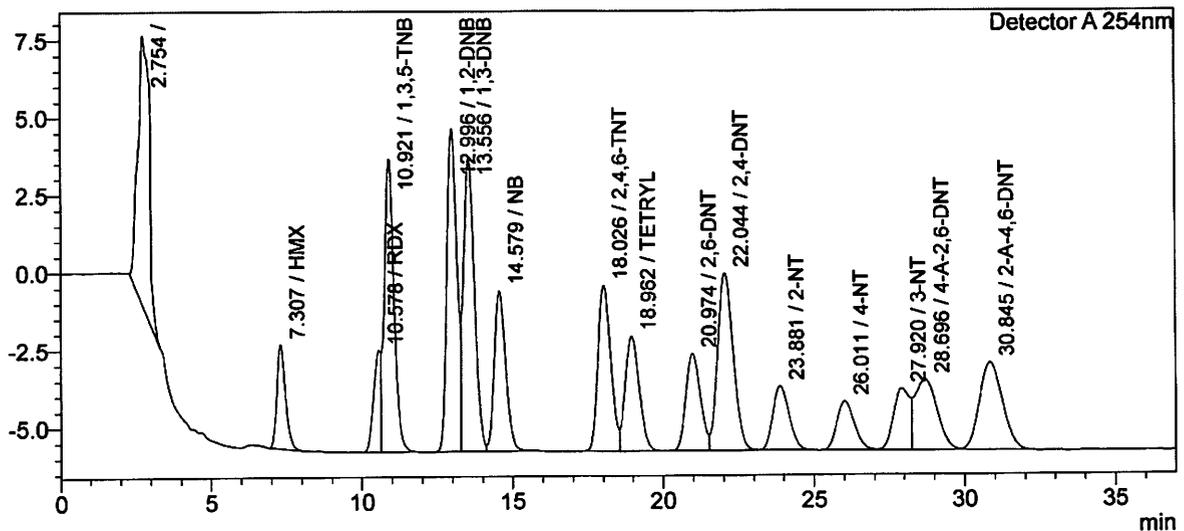
## Analysis Report

## &lt;Sample Information&gt;

Sample Name : ICV  
 Sample ID :  
 Data Filename : ICV\_12222023\_008.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122223EXPDR.Tcb  
 Vial # : 1-8  
 Injection Volume : 100 uL  
 Date Acquired : 12/22/2023 1:52:15 PM  
 Date Processed : 12/26/2023 3:04:40 PM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## &lt;Chromatogram&gt;

mV



## &lt;Peak Table&gt;

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
2	HMX	7.307	66341	3360	406.935	mg/L
3	RDX	10.578	53534	3270	418.910	mg/L
4	1,3,5-TNB	10.921	210221	9438	409.890	mg/L
5	1,2-DNB	12.996	240759	10410	1018.039	mg/L
6	1,3-DNB	13.556	240113	9478	412.084	mg/L
7	NB	14.579	135641	5177	409.450	mg/L
8	2,4,6-TNT	18.026	157371	5349	409.282	mg/L
9	TETRYL	18.962	121408	3696	375.872	mg/L
10	2,6-DNT	20.974	104746	3125	378.674	mg/L
11	2,4-DNT	22.044	205551	5727	407.912	mg/L
12	2-NT	23.881	77289	2069	363.940	mg/L
13	4-NT	26.011	63474	1577	366.086	mg/L
14	3-NT	27.920	76091	1993	369.315	mg/L
15	4-A-2,6-DNT	28.696	115933	2279	372.413	mg/L
16	2-A-4,6-DNT	30.845	149550	2824	376.908	mg/L
Total			2018022	69769		



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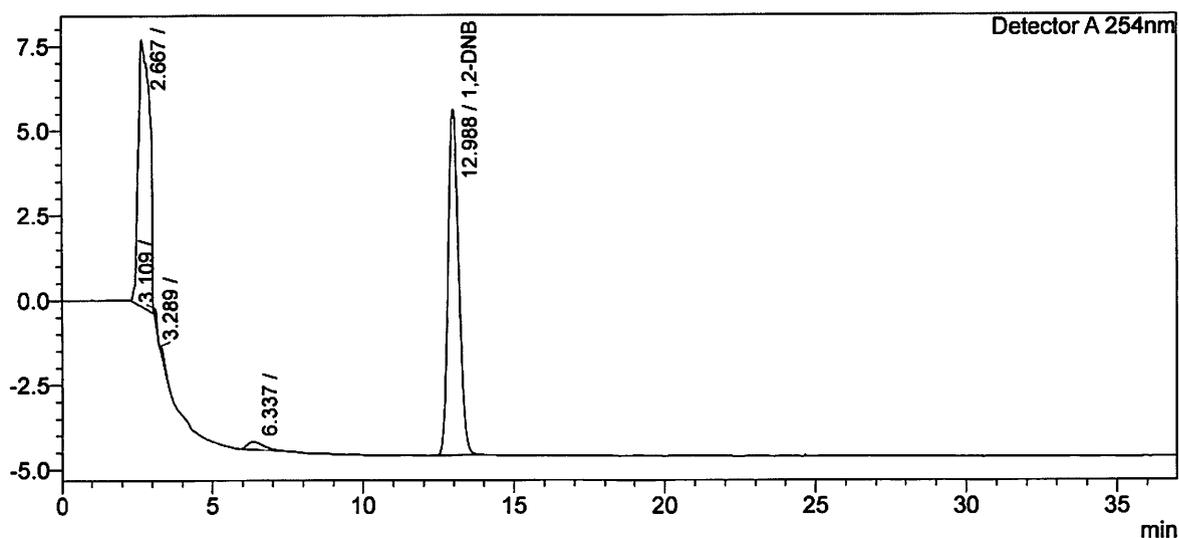
# Analysis Report

## <Sample Information>

Sample Name : BDK1089-BLK1  
 Sample ID :  
 Data Filename : BDK1089-BLK1\_12222023\_009.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122223EXPDR.Tcb  
 Vial # : 1-9  
 Injection Volume : 100 uL  
 Date Acquired : 12/22/2023 2:29:41 PM  
 Date Processed : 12/26/2023 3:04:41 PM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
5	1,2-DNB	12.988	247244	10185	1045.458	mg/L
Total			247244	10185		



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## Analysis Report

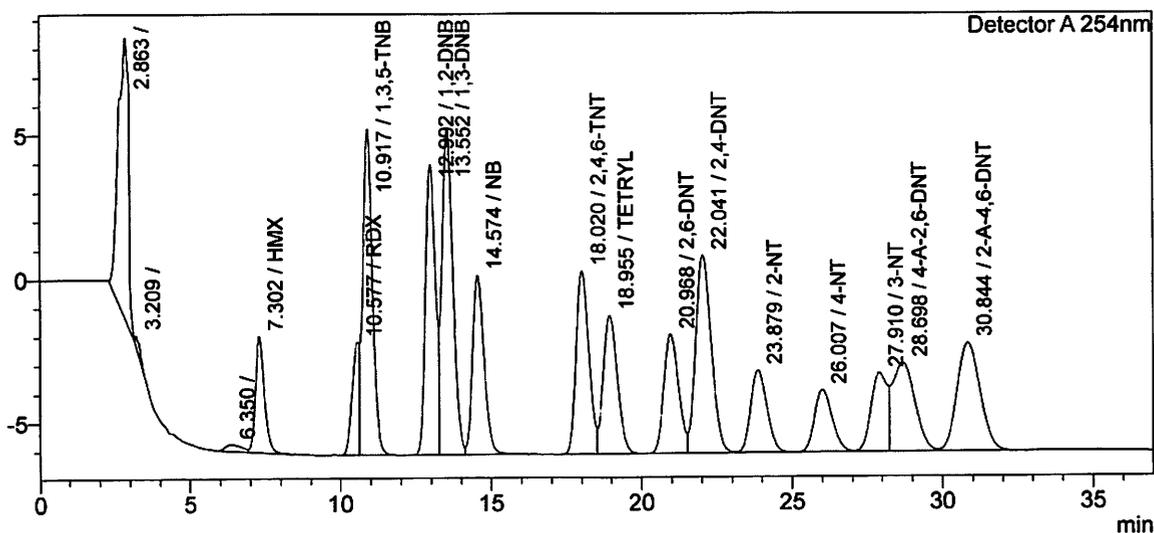
## &lt;Sample Information&gt;

Sample Name : BDK1089-BS1  
 Sample ID :  
 Data Filename : BDK1089-BS1\_12222023\_010.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122223EXPDR.Tcb  
 Vial # : 1-10  
 Injection Volume : 100 uL  
 Date Acquired : 12/22/2023 3:07:07 PM  
 Date Processed : 12/26/2023 3:04:42 PM

Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## &lt;Chromatogram&gt;

mV



## &lt;Peak Table&gt;

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
4	HMX	7.302	82375	4044	505.290	mg/L
5	RDX	10.577	63037	3900	493.270	mg/L
6	1,3,5-TNB	10.917	249786	11332	487.034	mg/L
7	1,2-DNB	12.992	231426	10070	978.574	mg/L
8	1,3-DNB	13.552	287762	11329	493.860	mg/L
9	NB	14.574	164459	6227	496.441	mg/L
10	2,4,6-TNT	18.020	187091	6369	486.578	mg/L
11	TETRYL	18.955	158423	4812	490.468	mg/L
12	2,6-DNT	20.968	140071	4134	506.378	mg/L
13	2,4-DNT	22.041	247899	6885	491.951	mg/L
14	2-NT	23.879	106423	2846	501.128	mg/L
15	4-NT	26.007	87405	2158	504.110	mg/L
16	3-NT	27.910	104214	2723	505.811	mg/L
17	4-A-2,6-DNT	28.698	157415	3074	505.665	mg/L
18	2-A-4,6-DNT	30.844	199159	3758	501.936	mg/L
Total			2466946	83661		



SHIMADZU

LabSolutions

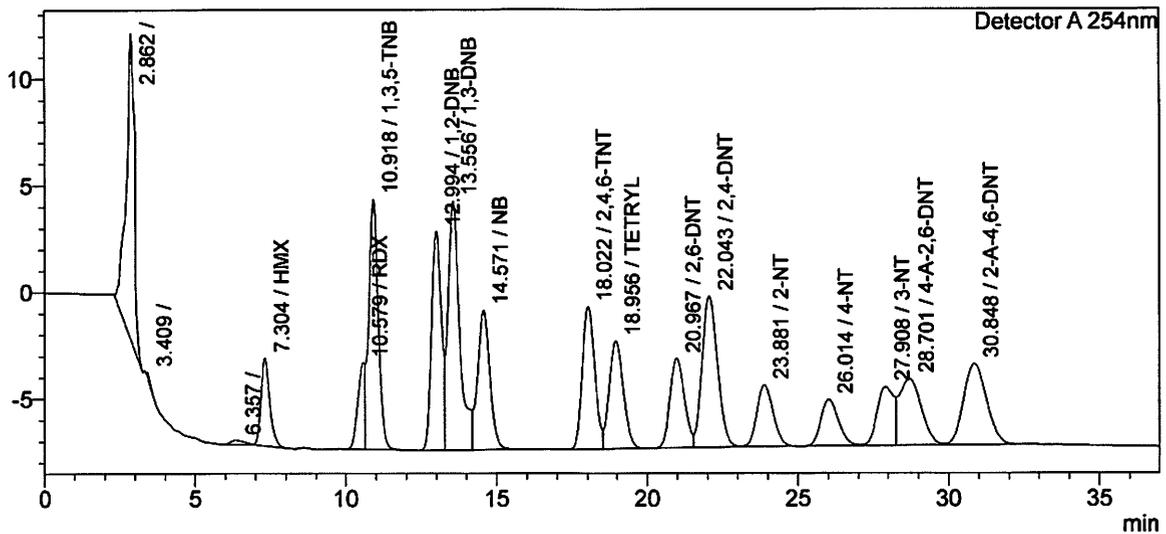
# Analysis Report

## <Sample Information>

Sample Name : BDK1089-MS1  
 Sample ID :  
 Data Filename : BDK1089-MS1\_12222023\_011.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122223EXPDR.Tcb  
 Vial # : 1-11  
 Injection Volume : 100 uL  
 Date Acquired : 12/22/2023 3:44:33 PM  
 Date Processed : 12/26/2023 3:04:44 PM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
4	HMX	7.304	81881	4112	502.259	mg/L
5	RDX	10.579	64619	4040	505.645	mg/L
6	1,3,5-TNB	10.918	255794	11705	498.748	mg/L
7	1,2-DNB	12.994	232956	10241	985.043	mg/L
8	1,3-DNB	13.556	323156	11669	554.604	mg/L
9	NB	14.571	183272	6528	553.232	mg/L
10	2,4,6-TNT	18.022	194751	6666	506.500	mg/L
11	TETRYL	18.956	163907	5033	507.445	mg/L
12	2,6-DNT	20.967	139239	4180	503.370	mg/L
13	2,4-DNT	22.043	252613	7068	501.305	mg/L
14	2-NT	23.881	107813	2879	507.674	mg/L
15	4-NT	26.014	87711	2175	505.876	mg/L
16	3-NT	27.908	105636	2745	512.712	mg/L
17	4-A-2,6-DNT	28.701	157382	3105	505.560	mg/L
18	2-A-4,6-DNT	30.848	200540	3790	505.418	mg/L
Total			2551270	85937		



SHIMADZU  
LabSolutions

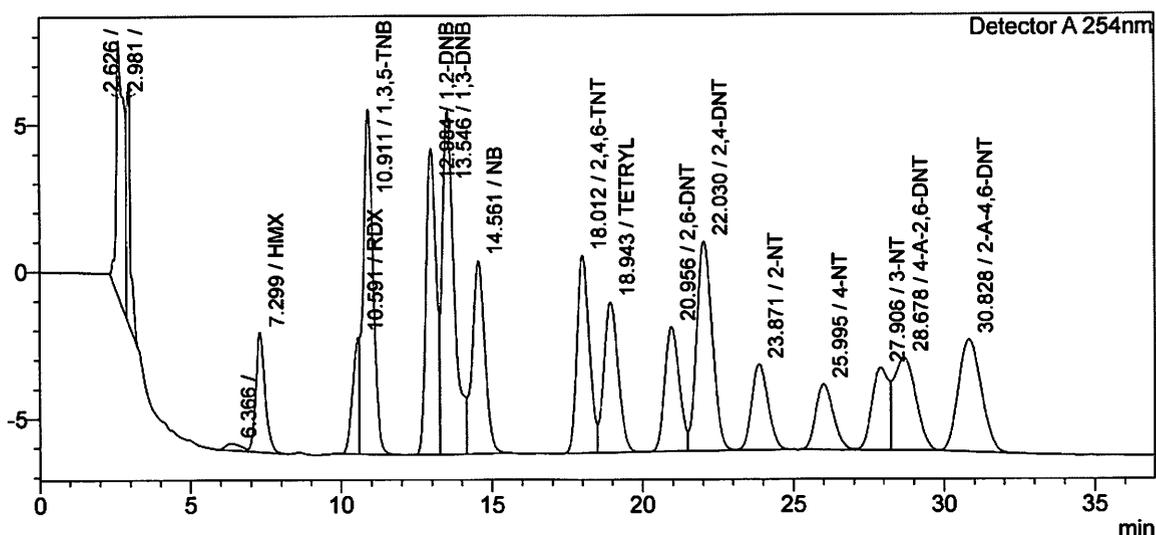
# Analysis Report

## <Sample Information>

Sample Name : BDK1089-MSD1  
 Sample ID :  
 Data Filename : BDK1089-MSD1\_12222023\_012.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122223EXPDR\elm.lcb  
 Vial # : 1-12  
 Injection Volume : 100 uL  
 Date Acquired : 12/22/2023 4:21:59 PM  
 Date Processed : 12/29/2023 10:18:09 AM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
4	HMX	7.299	85902	4073	537.535	mg/L
5	RDX	10.591	59915	3967	424.240	mg/L
6	1,3,5-TNB	10.911	266283	11723	538.288	mg/L
7	1,2-DNB	12.984	242369	10399	1012.465	mg/L
8	1,3-DNB	13.546	327619	11684	571.121	mg/L
9	NB	14.561	188603	6546	568.065	mg/L
10	2,4,6-TNT	18.012	197834	6700	514.695	mg/L
11	TETRYL	18.943	168590	5105	520.847	mg/L
12	2,6-DNT	20.956	142133	4234	514.392	mg/L
13	2,4-DNT	22.030	257772	7099	512.124	mg/L
14	2-NT	23.871	110129	2915	520.146	mg/L
15	4-NT	25.995	90525	2220	518.366	mg/L
16	3-NT	27.906	107864	2785	505.141	mg/L
17	4-A-2,6-DNT	28.678	158738	3137	532.925	mg/L
18	2-A-4,6-DNT	30.828	202025	3815	513.494	mg/L
Total			2606301	86402		



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LabSolutions

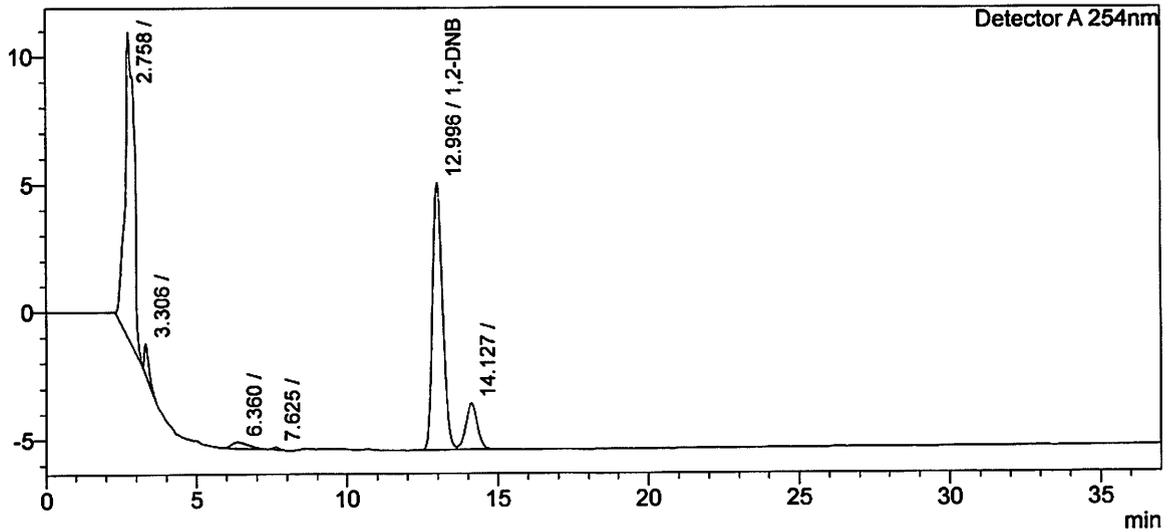
# Analysis Report

## <Sample Information>

Sample Name	: MDK0568-01	Sample Type	: Unknown
Sample ID	:	Acquired by	: System Administrator
Data Filename	: MDK0568-01_12222023_013.lcd	Processed by	: System Administrator
Method Filename	: 8330_50B_28C_final.lcm		
Batch Filename	: 122223EXPDR.Tcb		
Vial #	: 1-13		
Injection Volume	: 100 uL		
Date Acquired	: 12/22/2023 4:59:24 PM		
Date Processed	: 12/26/2023 3:04:46 PM		

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
5	1,2-DNB	12.996	242522	10465	1025.493	mg/L
Total			242522	10465		



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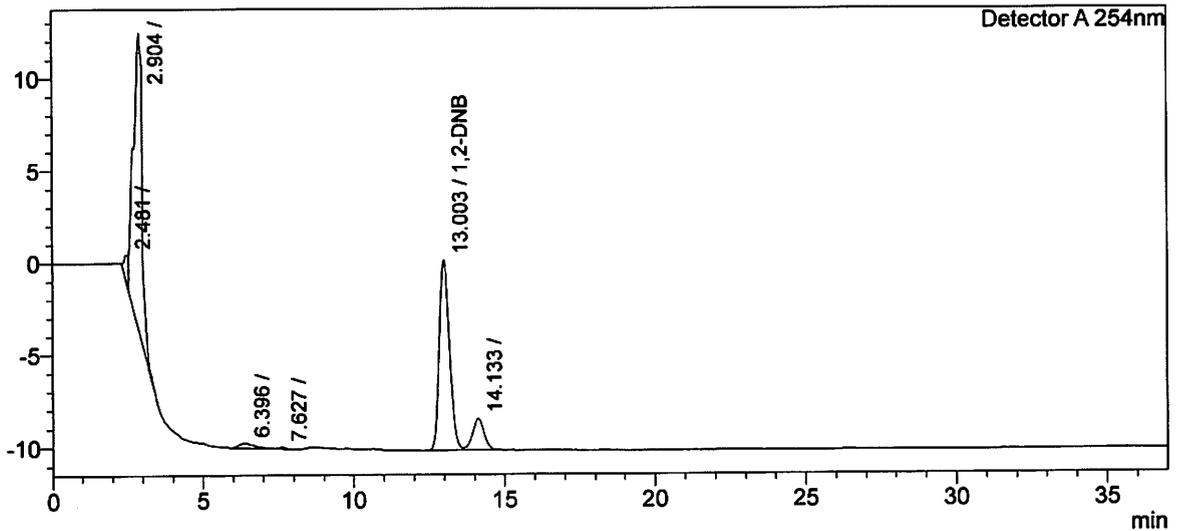
# Analysis Report

## <Sample Information>

Sample Name	: MDK0568-02	Sample Type	: Unknown
Sample ID	:	Acquired by	: System Administrator
Data Filename	: MDK0568-02_12222023_014.lcd	Processed by	: System Administrator
Method Filename	: 8330_50B_28C_final.lcm		
Batch Filename	: 122223EXPDR.Tcb		
Vial #	: 1-14		
Injection Volume	: 100 uL		
Date Acquired	: 12/22/2023 5:36:50 PM		
Date Processed	: 12/26/2023 3:04:48 PM		

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
5	1,2-DNB	13.003	240913	10321	1018.687	mg/L
Total			240913	10321		

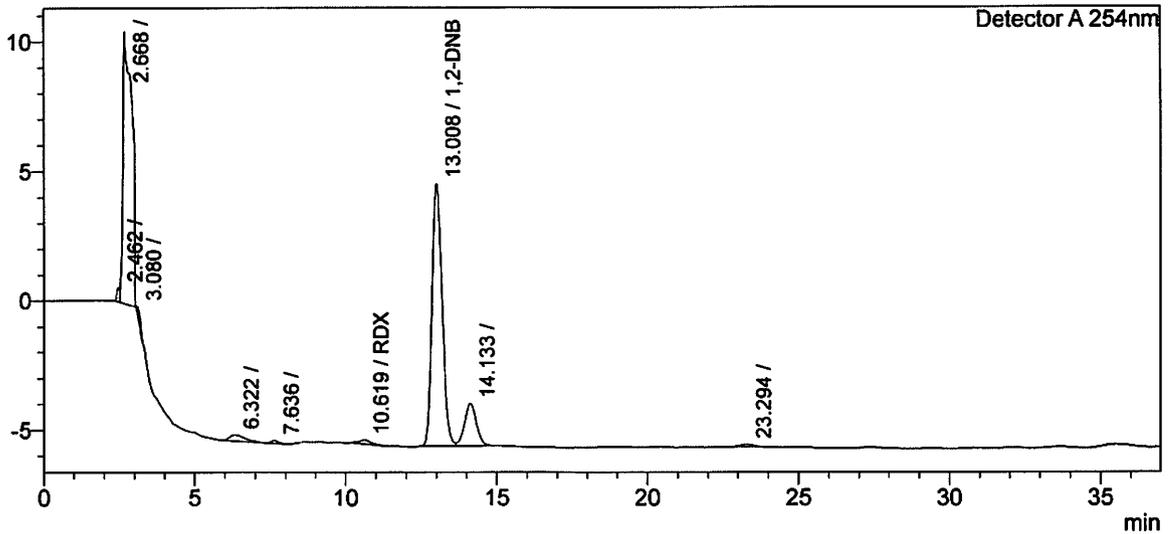
**SHIMADZU**  
**LabSolutions** **Analysis Report**

**<Sample Information>**

Sample Name : MDK0568-03  
 Sample ID :  
 Data Filename : MDK0568-03\_12222023\_015.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122223EXPDR.Tcb  
 Vial # : 1-15  
 Injection Volume : 100 uL  
 Date Acquired : 12/22/2023 6:14:16 PM  
 Date Processed : 12/26/2023 3:04:49 PM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

**<Chromatogram>**

mV



**<Peak Table>**

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
6	RDX	10.619	4236	149	33.147	mg/L
7	1,2-DNB	13.008	238827	10132	1009.867	mg/L
Total			243063	10281		

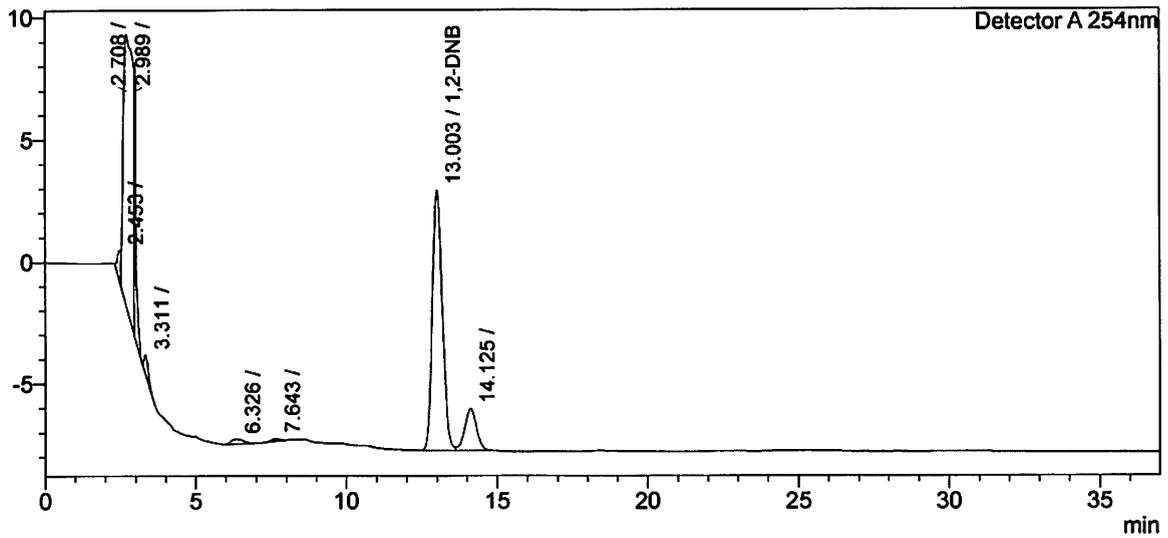
**SHIMADZU**  
**LabSolutions Analysis Report**

**<Sample Information>**

Sample Name : MDK0568-04  
 Sample ID :  
 Data Filename : MDK0568-04\_12222023\_016.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122223EXPDR.Tcb  
 Vial # : 1-16  
 Injection Volume : 100 uL  
 Date Acquired : 12/22/2023 6:52:23 PM  
 Date Processed : 12/26/2023 3:04:50 PM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

**<Chromatogram>**

mV



**<Peak Table>**

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
7	1,2-DNB	13.003	246896	10652	1043.986	mg/L
Total			246896	10652		

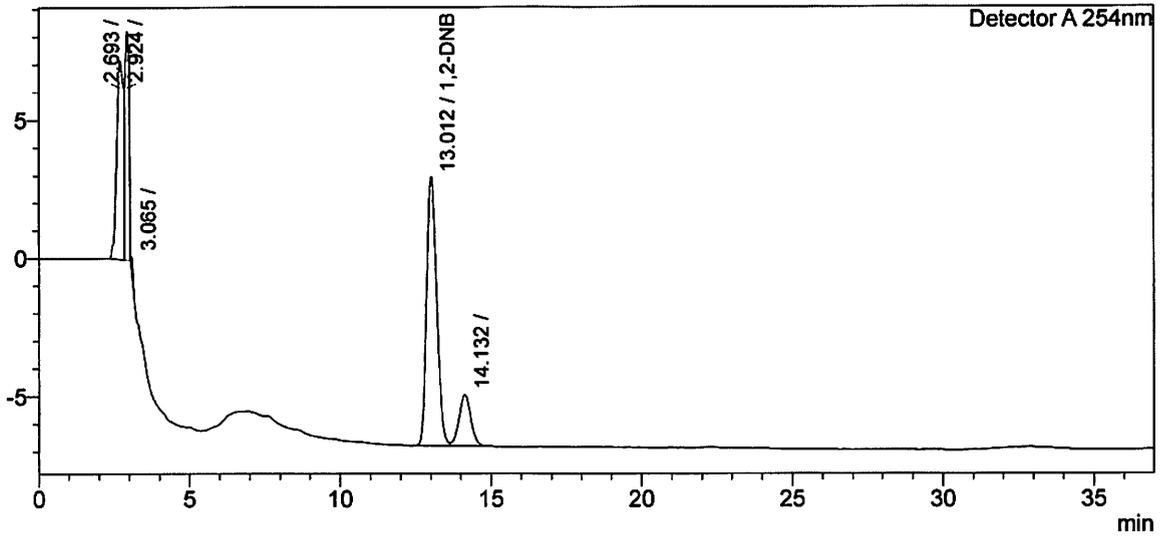
**SHIMADZU**  
**LabSolutions Analysis Report**

**<Sample Information>**

Sample Name : MDK0568-05  
 Sample ID :  
 Data Filename : MDK0568-05\_12222023\_017.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122223EXPDR.Tcb  
 Vial # : 1-17  
 Injection Volume : 100 uL  
 Date Acquired : 12/22/2023 7:30:19 PM  
 Date Processed : 12/26/2023 3:04:52 PM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

**<Chromatogram>**

mV



**<Peak Table>**

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
4	1,2-DNB	13.012	226367	9724	957.182	mg/L
Total			226367	9724		

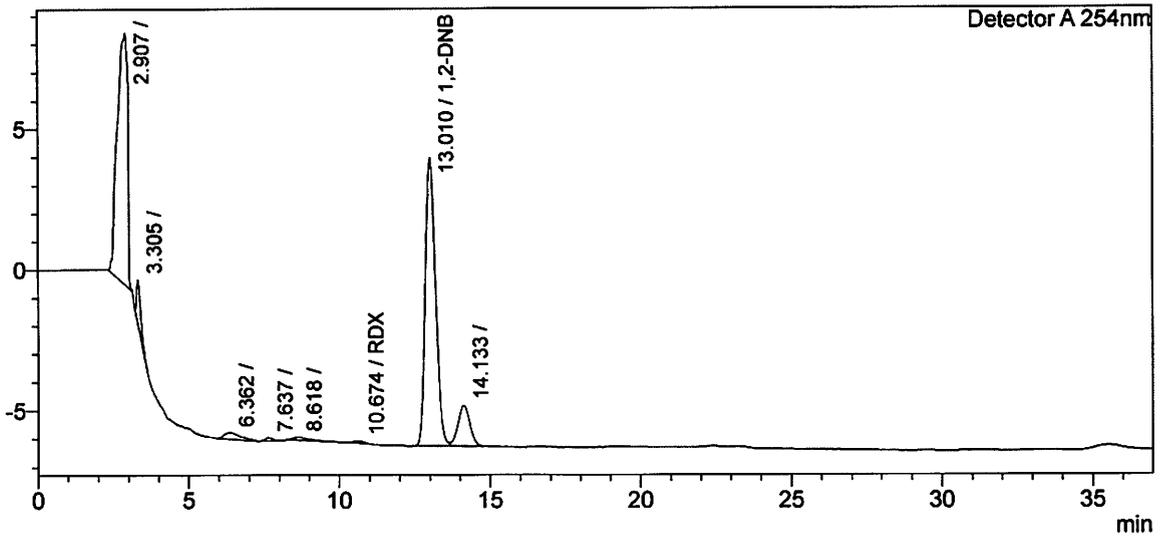
**SHIMADZU**  
**LabSolutions Analysis Report**

**<Sample Information>**

Sample Name : MDK0568-06  
 Sample ID :  
 Data Filename : MDK0568-06\_12222023\_018.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122223EXPDR.Tcb  
 Vial # : 1-18  
 Injection Volume : 100 uL  
 Date Acquired : 12/22/2023 8:08:15 PM  
 Date Processed : 12/26/2023 3:04:53 PM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

**<Chromatogram>**

mV



**<Peak Table>**

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
6	RDX	10.674	1638	76	12.821	mg/L
7	1,2-DNB	13.010	241938	10217	1023.023	mg/L
Total			243576	10293		



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LabSolutions

# Analysis Report

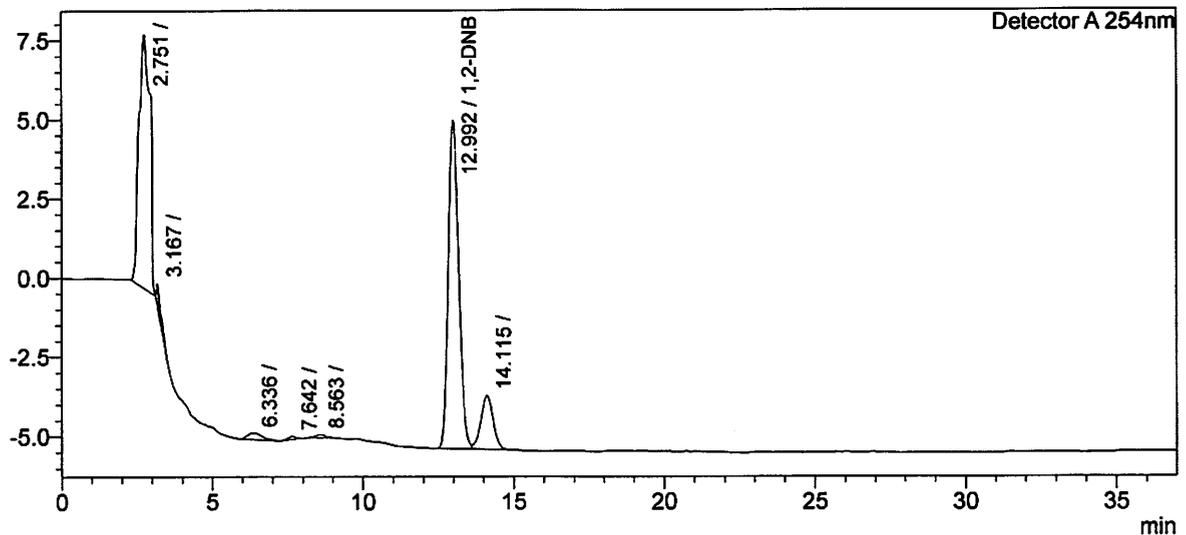
## <Sample Information>

Sample Name : MDK0568-07  
 Sample ID :  
 Data Filename : MDK0568-07\_12222023\_019.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122223EXPDR.Tcb  
 Vial # : 1-19  
 Injection Volume : 100 uL  
 Date Acquired : 12/22/2023 8:46:09 PM  
 Date Processed : 12/26/2023 3:04:54 PM

Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
6	1,2-DNB	12.992	250236	10339	1058.113	mg/L
Total			250236	10339		



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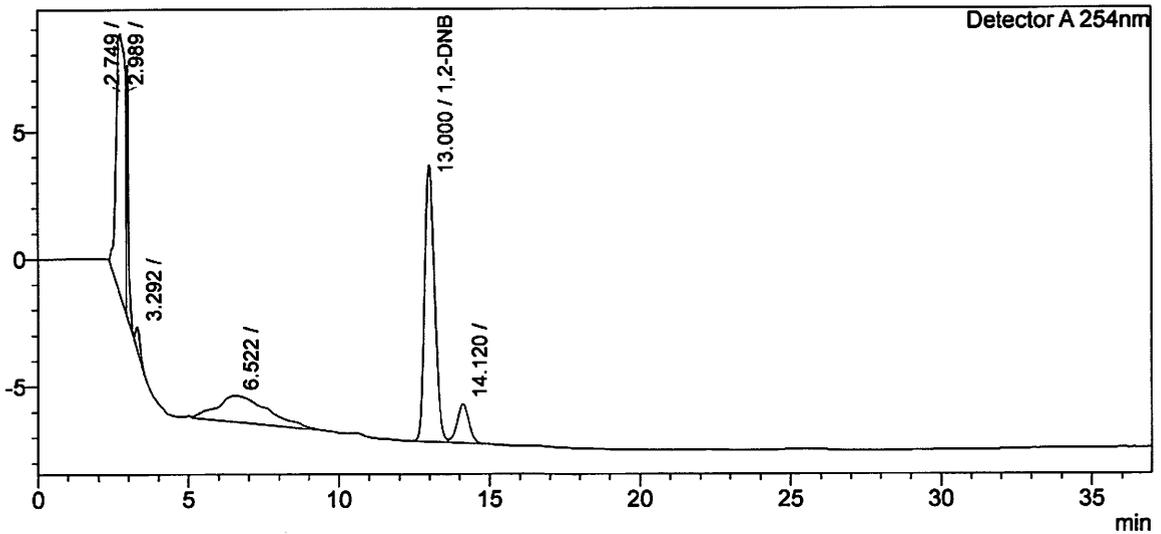
# Analysis Report

## <Sample Information>

Sample Name	: MDK0568-08	Sample Type	: Unknown
Sample ID	:	Acquired by	: System Administrator
Data Filename	: MDK0568-08_12222023_020.lcd	Processed by	: System Administrator
Method Filename	: 8330_50B_28C_final.lcm		
Batch Filename	: 122223EXPDR.lcb		
Vial #	: 1-20		
Injection Volume	: 100 uL		
Date Acquired	: 12/22/2023 9:24:03 PM		
Date Processed	: 12/26/2023 3:04:56 PM		

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
5	1,2-DNB	13.000	250994	10838	1061.314	mg/L
Total			250994	10838		

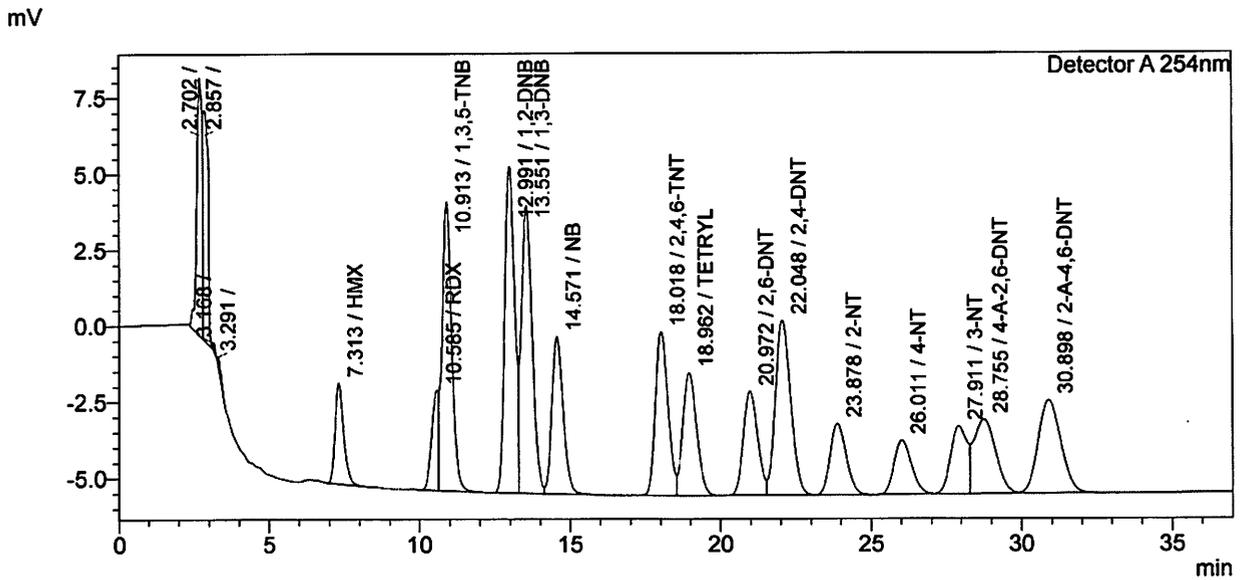


# Analysis Report

## <Sample Information>

Sample Name : CCV 400 ppb  
 Sample ID :  
 Data Filename : CCV 400 ppb\_12222023\_021.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122223EXPDR.Tcb  
 Vial # : 1-4  
 Injection Volume : 100 uL  
 Date Acquired : 12/22/2023 10:01:59 PM  
 Date Processed : 12/26/2023 3:04:57 PM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
5	HMX	7.313	65399	3312	401.162	mg/L
6	RDX	10.585	50427	3277	394.590	mg/L
7	1,3,5-TNB	10.913	209297	9485	408.088	mg/L
8	1,2-DNB	12.991	245384	10729	1037.597	mg/L
9	1,3-DNB	13.551	235798	9452	404.679	mg/L
10	NB	14.571	133836	5144	404.001	mg/L
11	2,4,6-TNT	18.018	155383	5359	404.114	mg/L
12	TETRYL	18.962	129770	4013	401.760	mg/L
13	2,6-DNT	20.972	111732	3390	403.928	mg/L
14	2,4-DNT	22.048	201725	5710	400.319	mg/L
15	2-NT	23.878	86033	2326	405.113	mg/L
16	4-NT	26.011	70725	1767	407.909	mg/L
17	3-NT	27.911	86630	2210	420.464	mg/L
18	4-A-2,6-DNT	28.755	121087	2431	388.968	mg/L
19	2-A-4,6-DNT	30.898	158854	3045	400.356	mg/L
Total			2062079	71649		



SHIMADZU

LabSolutions

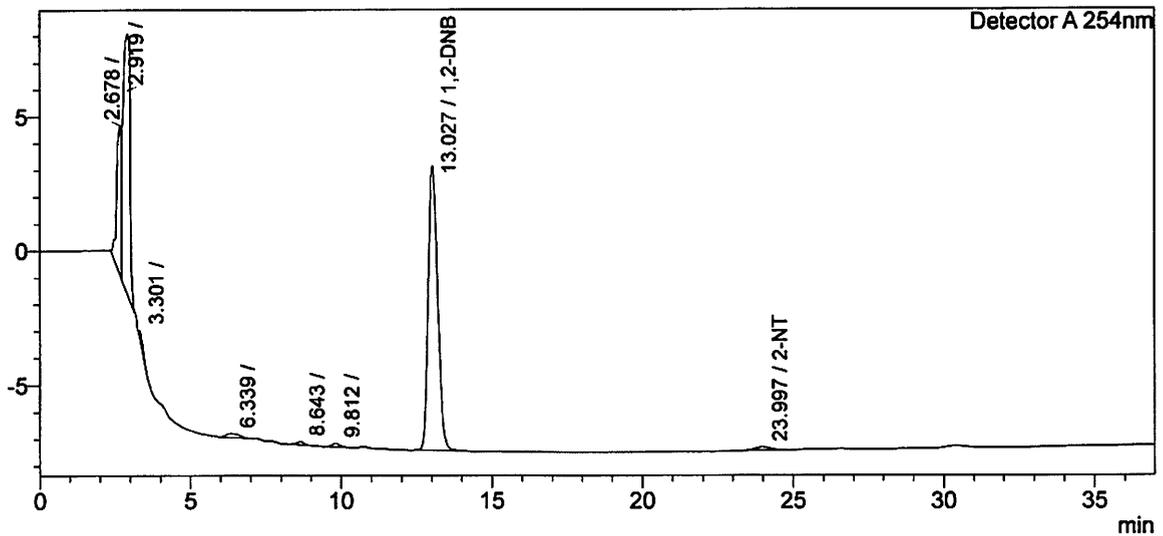
# Analysis Report

## <Sample Information>

Sample Name : BDK1088-BLK1  
 Sample ID :  
 Data Filename : BDK1088-BLK1\_12222023\_022.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122223EXPDR.Tcb  
 Vial # : 1-21  
 Injection Volume : 100 uL  
 Date Acquired : 12/22/2023 10:39:54 PM  
 Date Processed : 12/26/2023 3:04:58 PM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
7	1,2-DNB	13.027	230225	10576	973.494	mg/L
8	2-NT	23.997	3514	108	16.547	mg/L
Total			233739	10683		



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LabSolutions

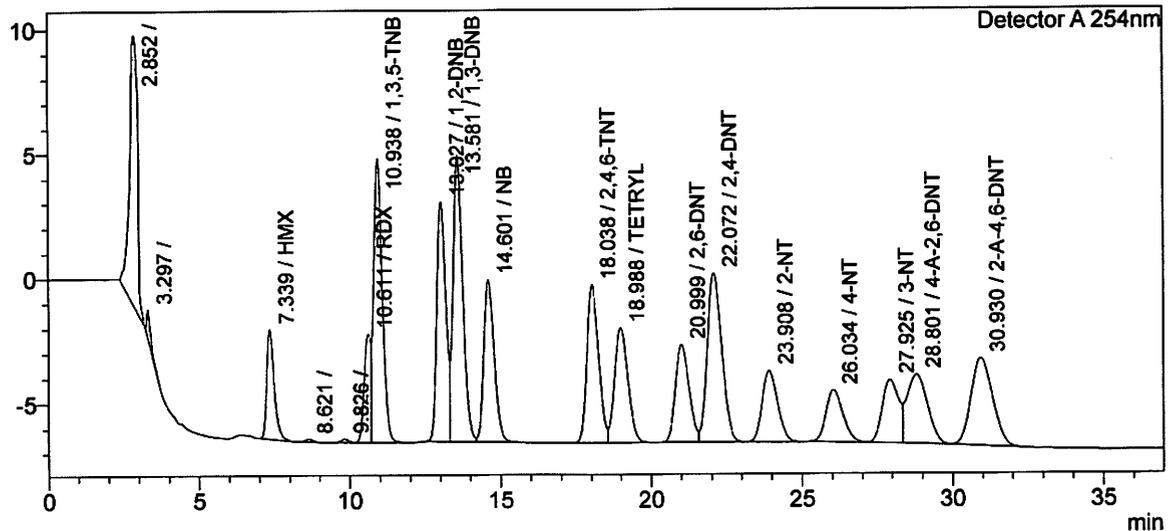
## Analysis Report

## &lt;Sample Information&gt;

Sample Name : BDK1088-BS1  
 Sample ID :  
 Data Filename : BDK1088-BS1\_12222023\_023.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122223EXPDR.lcb  
 Vial # : 1-22  
 Injection Volume : 100 uL  
 Date Acquired : 12/22/2023 11:17:49 PM  
 Date Processed : 12/26/2023 3:05:00 PM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## &lt;Chromatogram&gt;

mV



## &lt;Peak Table&gt;

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
3	HMX	7.339	74860	4387	459.192	mg/L
6	RDX	10.611	64054	4324	501.224	mg/L
7	1,3,5-TNB	10.938	225067	11334	438.837	mg/L
8	1,2-DNB	13.027	200880	9593	849.413	mg/L
9	1,3-DNB	13.581	264724	11495	454.322	mg/L
10	NB	14.601	154646	6466	466.819	mg/L
11	2,4,6-TNT	18.038	175217	6303	455.696	mg/L
12	TETRYL	18.988	141401	4579	437.766	mg/L
13	2,6-DNT	20.999	122845	3895	444.105	mg/L
14	2,4-DNT	22.072	225944	6749	448.381	mg/L
15	2-NT	23.908	100900	2847	475.118	mg/L
16	4-NT	26.034	80618	2074	464.964	mg/L
17	3-NT	27.925	96578	2535	468.751	mg/L
18	4-A-2,6-DNT	28.801	130504	2771	419.218	mg/L
19	2-A-4,6-DNT	30.930	174722	3501	440.349	mg/L
Total			2232959	82853		

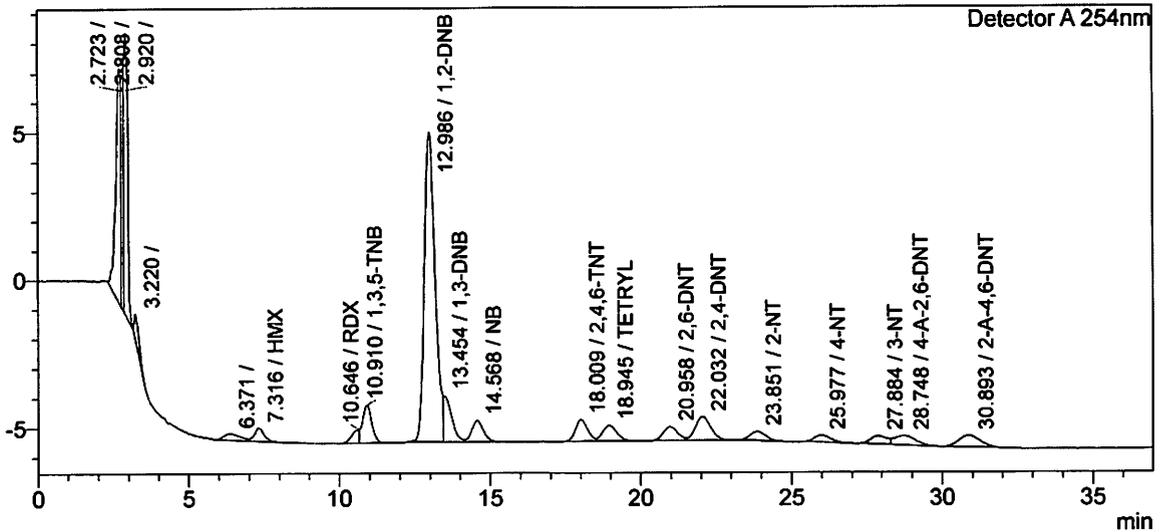
**SHIMADZU**  
**LabSolutions** **Analysis Report**

**<Sample Information>**

Sample Name : BDK1088-MRL1  
 Sample ID :  
 Data Filename : BDK1088-MRL1\_12222023\_024.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122223EXPDR.Tcb  
 Vial # : 1-23  
 Injection Volume : 100 uL  
 Date Acquired : 12/22/2023 11:55:44 PM  
 Date Processed : 12/26/2023 3:05:01 PM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

**<Chromatogram>**

mV



**<Peak Table>**

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
6	HMX	7.316	9965	447	61.129	mg/L
7	RDX	10.646	7432	439	58.159	mg/L
8	1,3,5-TNB	10.910	27041	1276	52.725	mg/L
9	1,2-DNB	12.986	259750	10455	1098.341	mg/L
10	1,3-DNB	13.454	29736	1553	51.033	mg/L
11	NB	14.568	18463	706	55.734	mg/L
12	2,4,6-TNT	18.009	20892	732	54.336	mg/L
13	TETRYL	18.945	16917	529	52.373	mg/L
14	2,6-DNT	20.958	15324	467	55.399	mg/L
15	2,4-DNT	22.032	28348	793	56.256	mg/L
16	2-NT	23.851	10629	299	50.048	mg/L
17	4-NT	25.977	8567	226	49.409	mg/L
18	3-NT	27.884	10389	272	50.426	mg/L
19	4-A-2,6-DNT	28.748	14970	311	48.087	mg/L
20	2-A-4,6-DNT	30.893	19229	391	48.461	mg/L
Total			497652	18896		



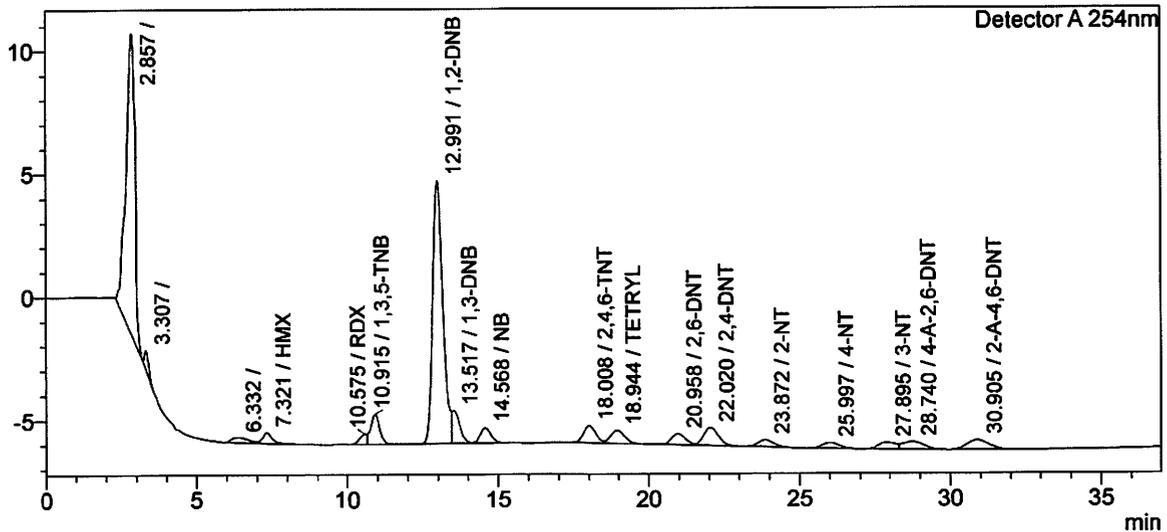
# Analysis Report

## <Sample Information>

Sample Name : BDK1088-MRL2  
 Sample ID :  
 Data Filename : BDK1088-MRL2\_12222023\_025.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122223EXPDR.Tcb  
 Vial # : 1-24  
 Injection Volume : 100 uL  
 Date Acquired : 12/23/2023 12:33:38 AM  
 Date Processed : 12/26/2023 3:05:02 PM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
4	HMX	7.321	9393	437	57.619	mg/L
5	RDX	10.575	6901	416	53.999	mg/L
6	1,3,5-TNB	10.915	24749	1203	48.256	mg/L
7	1,2-DNB	12.991	249721	10638	1055.934	mg/L
8	1,3-DNB	13.517	23966	1320	41.131	mg/L
9	NB	14.568	14925	613	45.054	mg/L
10	2,4,6-TNT	18.008	19580	686	50.923	mg/L
11	TETRYL	18.944	16696	526	51.689	mg/L
12	2,6-DNT	20.958	14357	443	51.905	mg/L
13	2,4-DNT	22.020	25240	735	50.088	mg/L
14	2-NT	23.872	9570	281	45.063	mg/L
15	4-NT	25.997	8514	225	49.102	mg/L
16	3-NT	27.895	10879	277	52.804	mg/L
17	4-A-2,6-DNT	28.740	15096	315	48.494	mg/L
18	2-A-4,6-DNT	30.905	18813	389	47.413	mg/L
Total			468401	18503		



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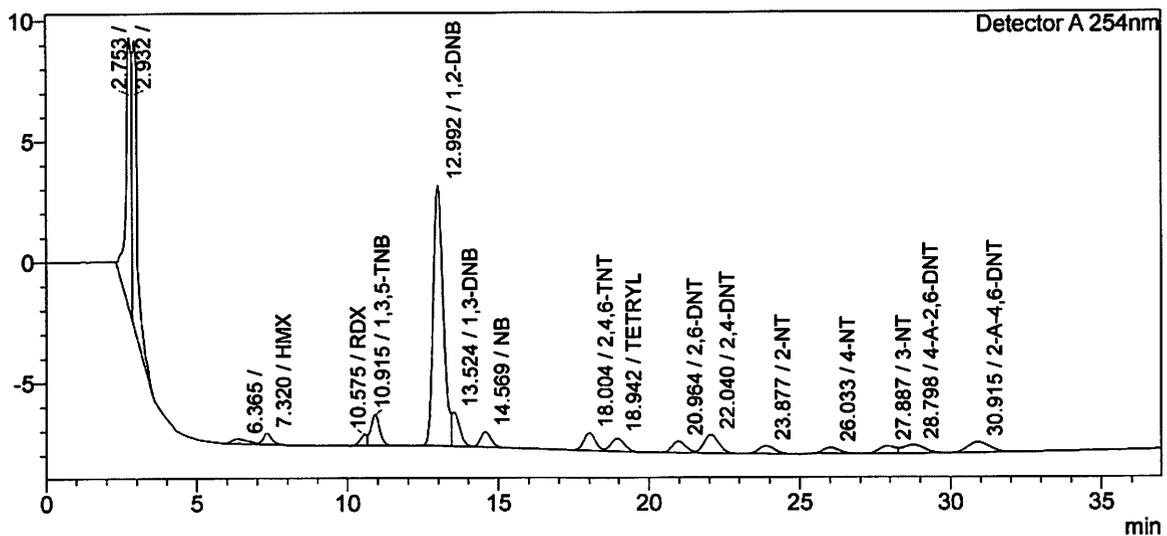
# Analysis Report

## <Sample Information>

Sample Name : BDK1088-MRL3  
 Sample ID :  
 Data Filename : BDK1088-MRL3\_12222023\_026.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122223EXPDR.Tcb  
 Vial # : 1-25  
 Injection Volume : 100 uL  
 Date Acquired : 12/23/2023 1:11:44 AM  
 Date Processed : 12/26/2023 3:05:04 PM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
4	HMX	7.320	9475	468	58.121	mg/L
5	RDX	10.575	7357	454	57.569	mg/L
6	1,3,5-TNB	10.915	26443	1294	51.559	mg/L
7	1,2-DNB	12.992	249387	10767	1054.523	mg/L
8	1,3-DNB	13.524	25762	1401	44.213	mg/L
9	NB	14.569	14821	626	44.740	mg/L
10	2,4,6-TNT	18.004	20126	725	52.343	mg/L
11	TETRYL	18.942	16921	549	52.385	mg/L
12	2,6-DNT	20.964	14906	471	53.888	mg/L
13	2,4-DNT	22.040	25947	769	51.491	mg/L
14	2-NT	23.877	10876	315	51.215	mg/L
15	4-NT	26.033	8066	231	46.520	mg/L
16	3-NT	27.887	11103	299	53.889	mg/L
17	4-A-2,6-DNT	28.798	16634	343	53.432	mg/L
18	2-A-4,6-DNT	30.915	20549	420	51.789	mg/L
Total			478374	19132		

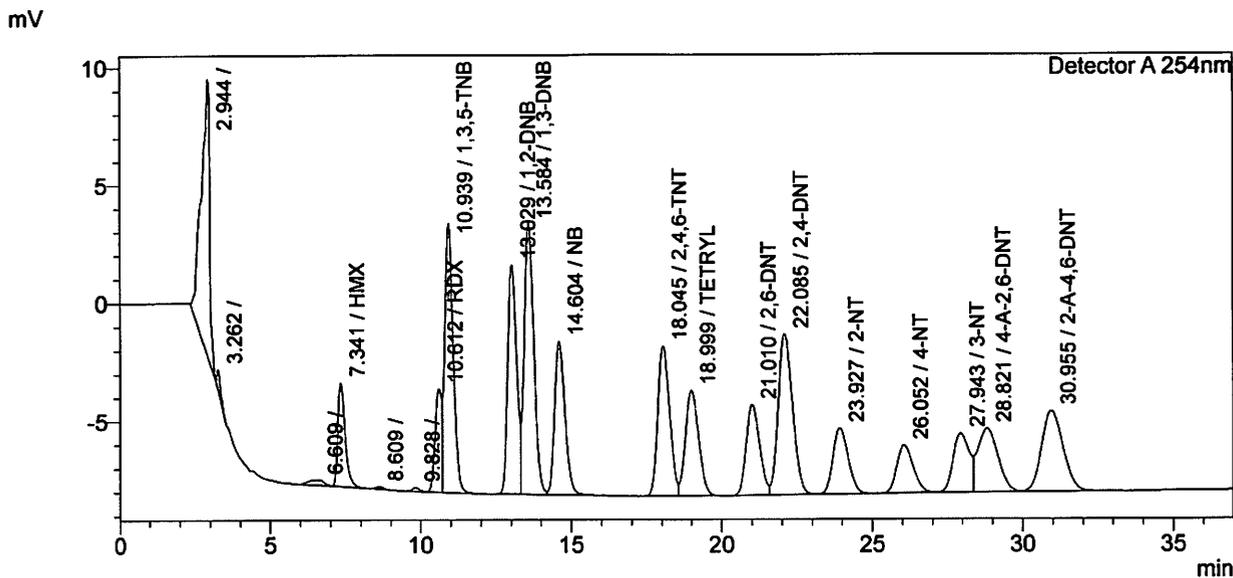


# Analysis Report

## <Sample Information>

Sample Name : BDK1088-MS1  
 Sample ID :  
 Data Filename : BDK1088-MS1\_12222023\_027.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122223EXPDR.lcb  
 Vial # : 1-26  
 Injection Volume : 100 uL  
 Date Acquired : 12/23/2023 1:49:38 AM  
 Date Processed : 12/26/2023 3:05:05 PM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
4	HMX	7.341	73604	4399	451.489	mg/L
7	RDX	10.612	65296	4389	510.946	mg/L
8	1,3,5-TNB	10.939	221972	11385	432.802	mg/L
9	1,2-DNB	13.029	199896	9692	845.250	mg/L
10	1,3-DNB	13.584	258471	11507	443.590	mg/L
11	NB	14.604	154006	6493	464.887	mg/L
12	2,4,6-TNT	18.045	173720	6330	451.802	mg/L
13	TETRYL	18.999	135519	4448	419.559	mg/L
14	2,6-DNT	21.010	118597	3820	428.746	mg/L
15	2,4-DNT	22.085	224642	6797	445.797	mg/L
16	2-NT	23.927	97338	2791	458.347	mg/L
17	4-NT	26.052	76236	2014	439.691	mg/L
18	3-NT	27.943	94032	2492	456.393	mg/L
19	4-A-2,6-DNT	28.821	125877	2685	404.356	mg/L
20	2-A-4,6-DNT	30.955	168718	3412	425.217	mg/L
Total			2187923	82652		



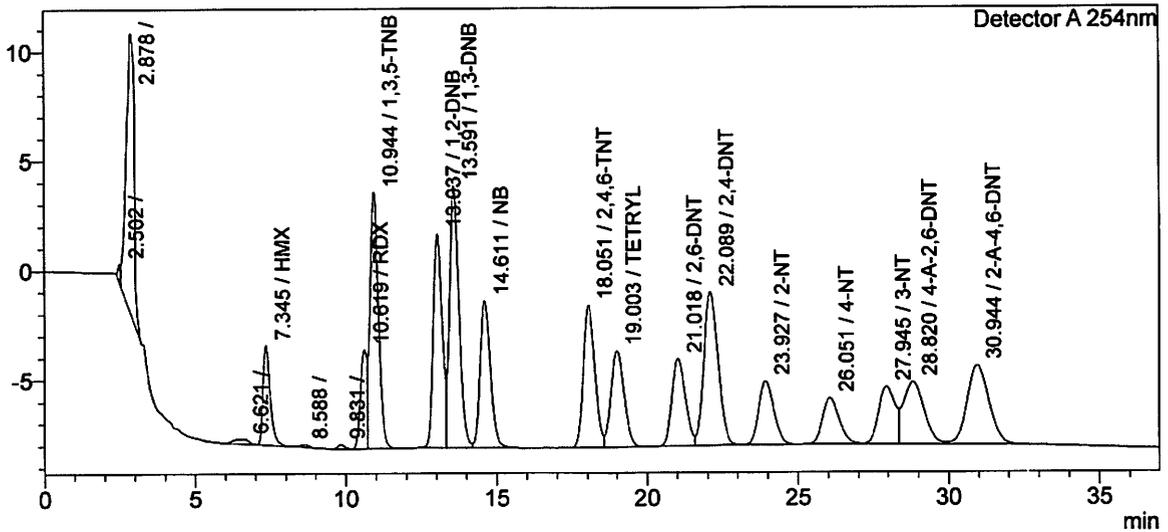
# Analysis Report

## <Sample Information>

Sample Name : BDK1088-MSD1  
 Sample ID :  
 Data Filename : BDK1088-MSD1\_12222023\_028.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122223EXPDR.Tcb  
 Vial # : 1-27  
 Injection Volume : 100 uL  
 Date Acquired : 12/23/2023 2:27:45 AM  
 Date Processed : 12/26/2023 3:05:07 PM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

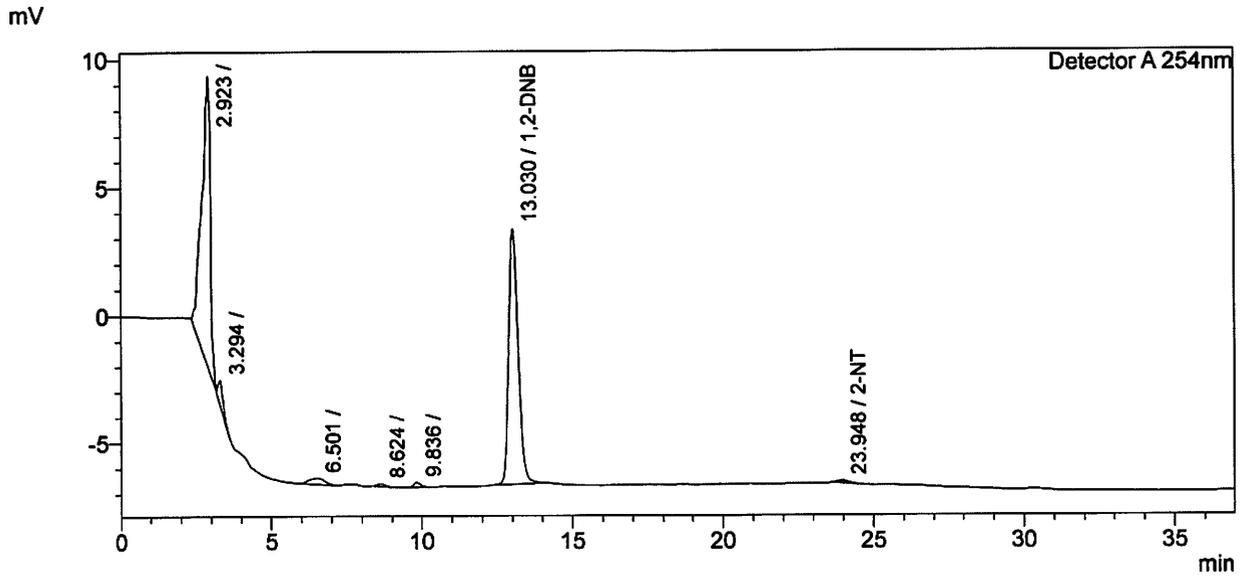
Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
4	HMX	7.345	75286	4516	461.806	mg/L
7	RDX	10.619	67240	4496	526.154	mg/L
8	1,3,5-TNB	10.944	225272	11677	439.237	mg/L
9	1,2-DNB	13.037	202246	9733	855.190	mg/L
10	1,3-DNB	13.591	268023	11906	459.984	mg/L
11	NB	14.611	158743	6684	479.188	mg/L
12	2,4,6-TNT	18.051	176817	6481	459.858	mg/L
13	TETRYL	19.003	132685	4370	410.783	mg/L
14	2,6-DNT	21.018	123827	3965	447.655	mg/L
15	2,4-DNT	22.089	229271	6968	454.984	mg/L
16	2-NT	23.927	100689	2901	474.125	mg/L
17	4-NT	26.051	80120	2092	462.091	mg/L
18	3-NT	27.945	100009	2624	485.401	mg/L
19	4-A-2,6-DNT	28.820	134917	2836	433.393	mg/L
20	2-A-4,6-DNT	30.944	181691	3593	457.913	mg/L
Total			2256836	84843		

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**LabSolutions Analysis Report**

**<Sample Information>**

Sample Name : MDK0709-07  
 Sample ID :  
 Data Filename : MDK0709-07\_12222023\_029.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122223EXPDR.Tcb  
 Vial # : 1-28  
 Injection Volume : 100 uL  
 Date Acquired : 12/23/2023 3:05:40 AM  
 Date Processed : 12/26/2023 3:05:08 PM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

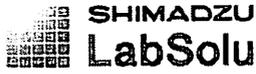
**<Chromatogram>**



**<Peak Table>**

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
6	1,2-DNB	13.030	217087	9995	917.942	mg/L
7	2-NT	23.948	2507	86	11.804	mg/L
Total			219594	10081		



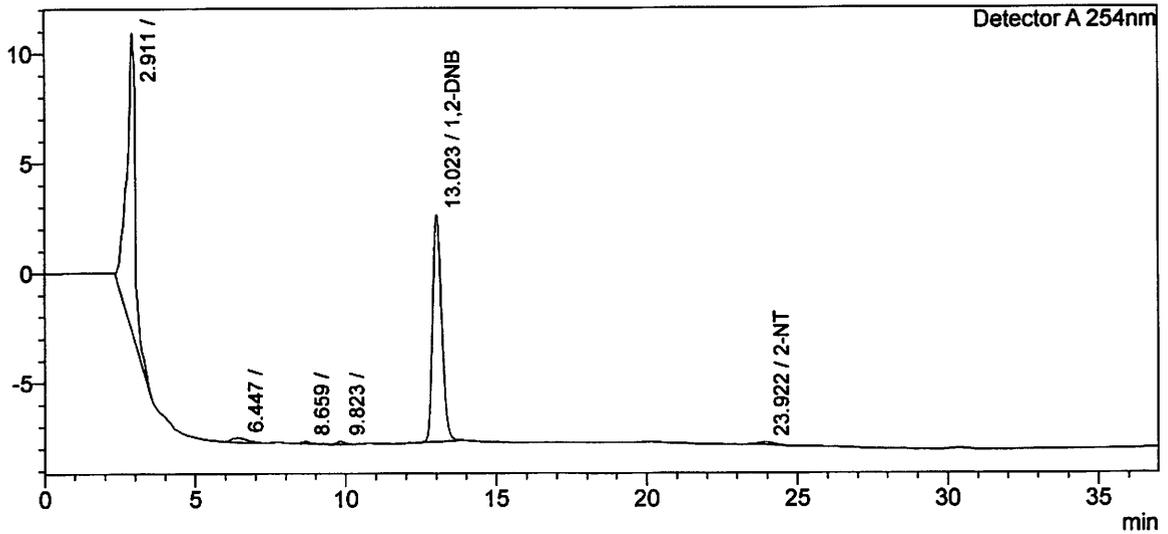
# Analysis Report

## <Sample Information>

Sample Name : MDK0709-01  
 Sample ID :  
 Data Filename : MDK0709-01\_12222023\_030.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122223EXPDR.Tcb  
 Vial # : 1-29  
 Injection Volume : 100 uL  
 Date Acquired : 12/23/2023 3:43:35 AM  
 Date Processed : 12/26/2023 3:05:09 PM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

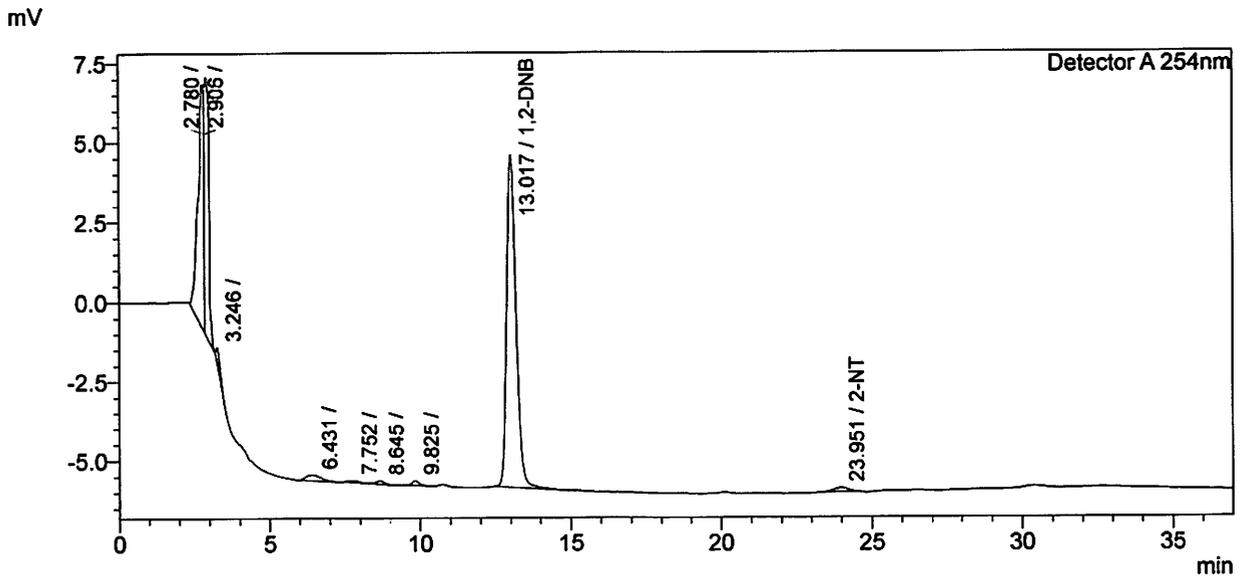
Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
5	1,2-DNB	13.023	215401	10324	910.813	mg/L
6	2-NT	23.922	3803	117	17.906	mg/L
Total			219204	10441		

**SHIMADZU**  
**LabSolutions Analysis Report**

**<Sample Information>**

Sample Name : MDK0709-02  
 Sample ID :  
 Data Filename : MDK0709-02\_12222023\_031.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122223EXPDR.lcb  
 Vial # : 1-30  
 Injection Volume : 100 uL  
 Date Acquired : 12/23/2023 4:21:29 AM  
 Date Processed : 12/26/2023 3:05:11 PM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

**<Chromatogram>**



**<Peak Table>**

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
8	1,2-DNB	13.017	226390	10447	957.279	mg/L
9	2-NT	23.951	3964	120	18.665	mg/L
Total			230354	10566		

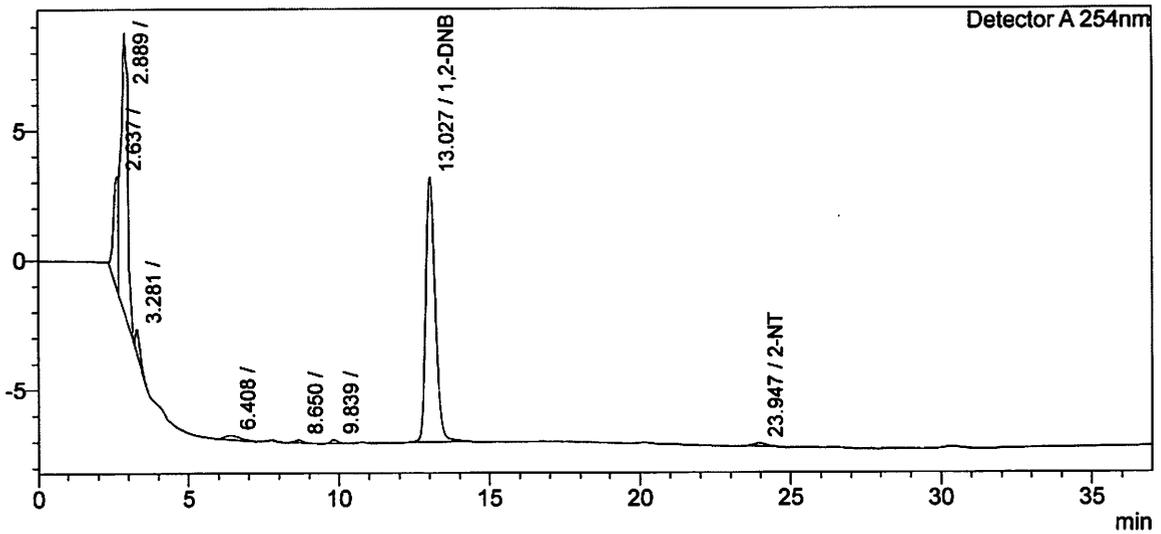
**SHIMADZU**  
**LabSolutions Analysis Report**

**<Sample Information>**

Sample Name : MDK0709-05  
 Sample ID :  
 Data Filename : MDK0709-05\_12222023\_032.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122223EXPDR.Icb  
 Vial # : 1-31  
 Injection Volume : 100 uL  
 Date Acquired : 12/23/2023 4:59:22 AM  
 Date Processed : 12/26/2023 3:05:12 PM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

**<Chromatogram>**

mV



**<Peak Table>**

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
7	1,2-DNB	13.027	221427	10199	936.292	mg/L
8	2-NT	23.947	3325	104	15.658	mg/L
Total			224752	10303		

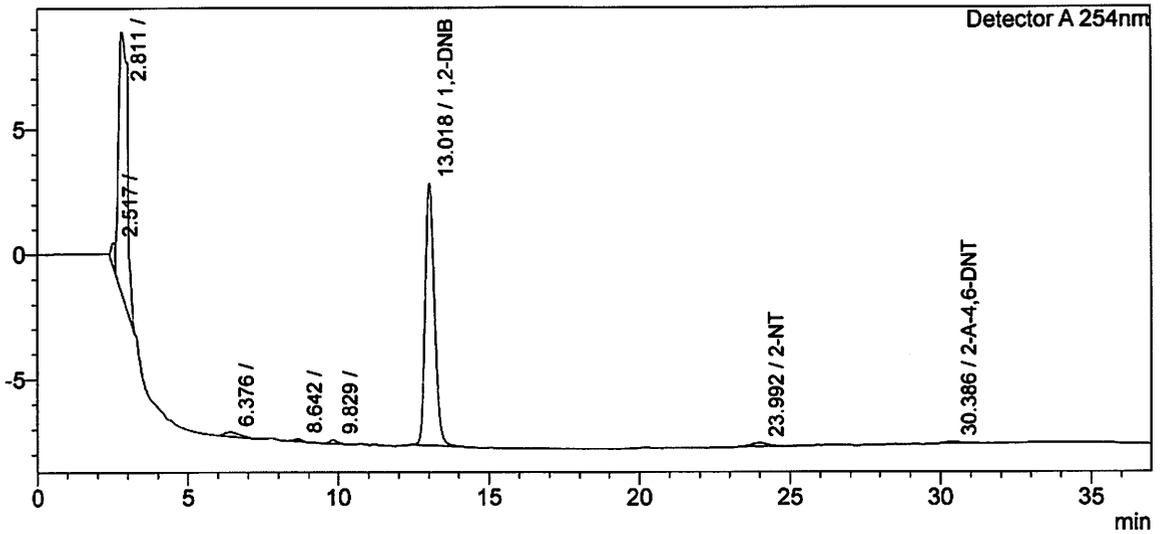
**SHIMADZU**  
**LabSolutions Analysis Report**

**<Sample Information>**

Sample Name : MDK0709-06  
 Sample ID :  
 Data Filename : MDK0709-06\_12222023\_033.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122223EXPDR.Icb  
 Vial # : 1-32  
 Injection Volume : 100 uL  
 Date Acquired : 12/23/2023 5:37:28 AM  
 Date Processed : 12/26/2023 3:05:13 PM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

**<Chromatogram>**

mV



**<Peak Table>**

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
6	1,2-DNB	13.018	222706	10471	941.701	mg/L
7	2-NT	23.992	4245	126	19.989	mg/L
8	2-A-4,6-DNT	30.386	1859	63	4.685	mg/L
Total			228810	10660		



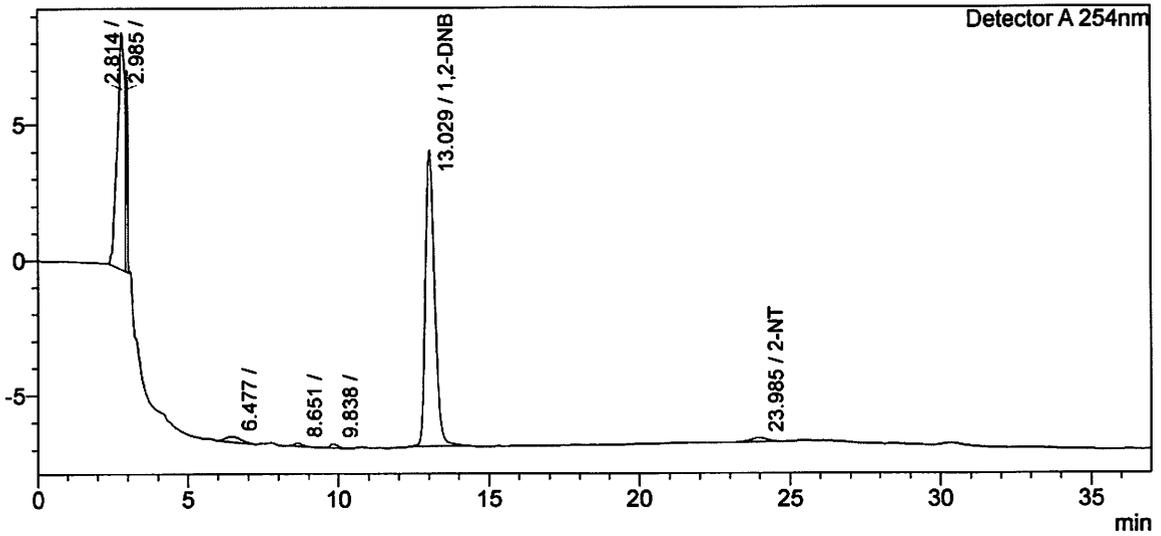
# Analysis Report

## <Sample Information>

Sample Name : MDK0709-08  
 Sample ID :  
 Data Filename : MDK0709-08\_12222023\_034.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122223EXPDR.lcb  
 Vial # : 1-33  
 Injection Volume : 100 uL  
 Date Acquired : 12/23/2023 6:15:24 AM  
 Date Processed : 12/26/2023 3:05:14 PM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
6	1,2-DNB	13.029	230804	10918	975.942	mg/L
7	2-NT	23.985	5077	138	23.905	mg/L
Total			235880	11056		



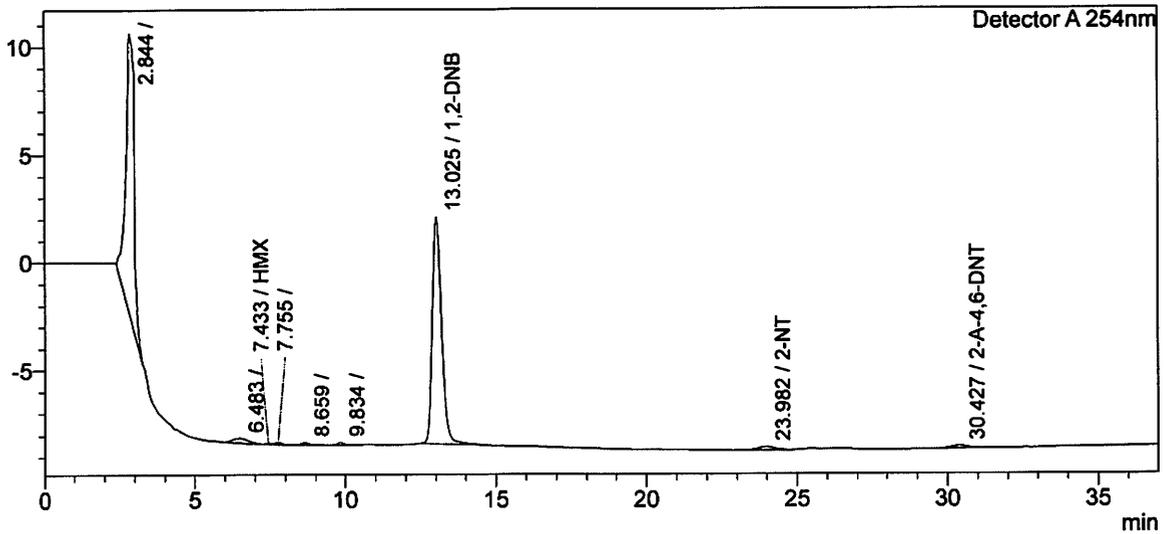
# Analysis Report

## <Sample Information>

Sample Name : MDK0709-09  
 Sample ID :  
 Data Filename : MDK0709-09\_12222023\_035.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122223EXPDR.lcb  
 Vial # : 1-34  
 Injection Volume : 100 uL  
 Date Acquired : 12/23/2023 6:53:19 AM  
 Date Processed : 12/26/2023 3:05:16 PM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
3	HMX	7.433	1006	51	6.174	mg/L
7	1,2-DNB	13.025	223883	10505	946.678	mg/L
8	2-NT	23.982	5030	137	23.686	mg/L
9	2-A-4,6-DNT	30.427	4077	109	10.276	mg/L
Total			233997	10802		



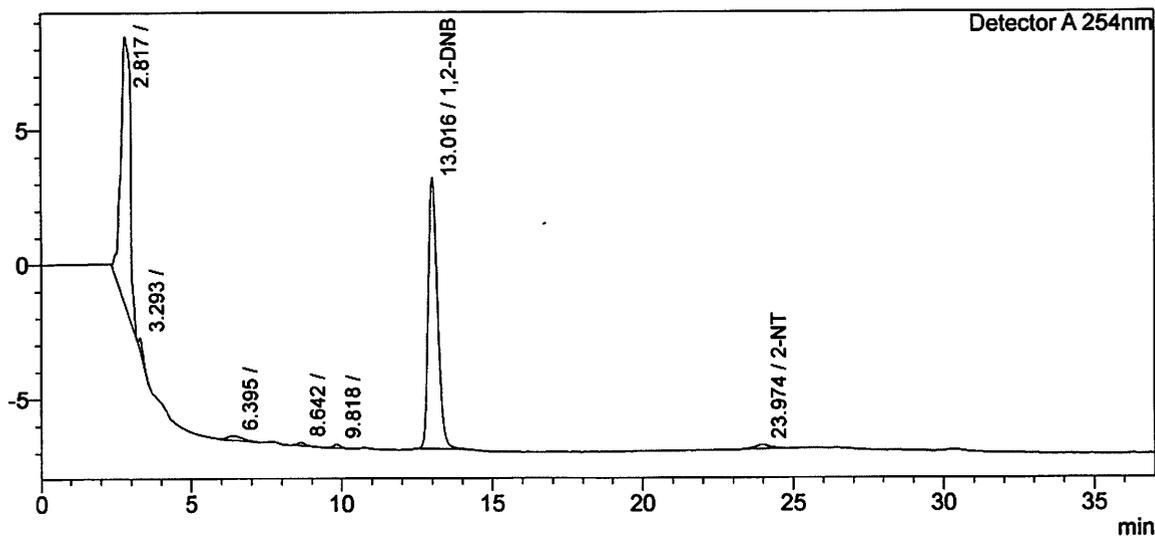
# Analysis Report

## <Sample Information>

Sample Name : MDK0709-11  
 Sample ID :  
 Data Filename : MDK0709-11\_12222023\_036.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122223EXPDR.Tcb  
 Vial # : 1-35  
 Injection Volume : 100 uL  
 Date Acquired : 12/23/2023 7:31:13 AM  
 Date Processed : 12/26/2023 3:05:17 PM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
6	1,2-DNB	13.016	213219	10069	901.588	mg/L
7	2-NT	23.974	4901	138	23.080	mg/L
Total			218121	10207		



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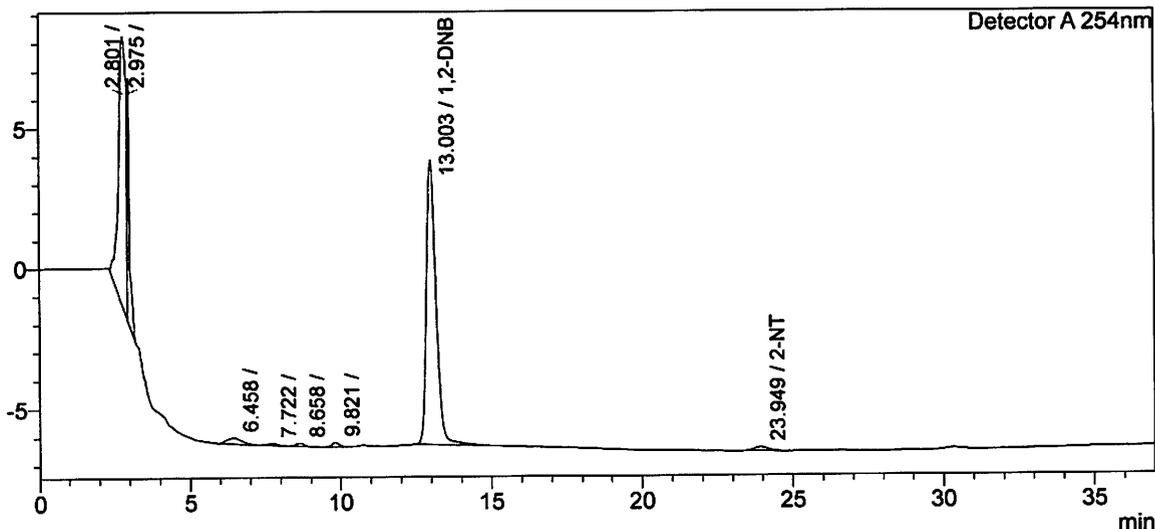
# Analysis Report

## <Sample Information>

Sample Name : MDK0709-12  
 Sample ID :  
 Data Filename : MDK0709-12\_12222023\_037.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122223EXPDR.Tcb  
 Vial # : 1-36  
 Injection Volume : 100 uL  
 Date Acquired : 12/23/2023 8:09:07 AM  
 Date Processed : 12/26/2023 3:05:18 PM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
7	1,2-DNB	13.003	222176	10117	939.460	mg/L
8	2-NT	23.949	4208	133	19.816	mg/L
Total			226384	10250		

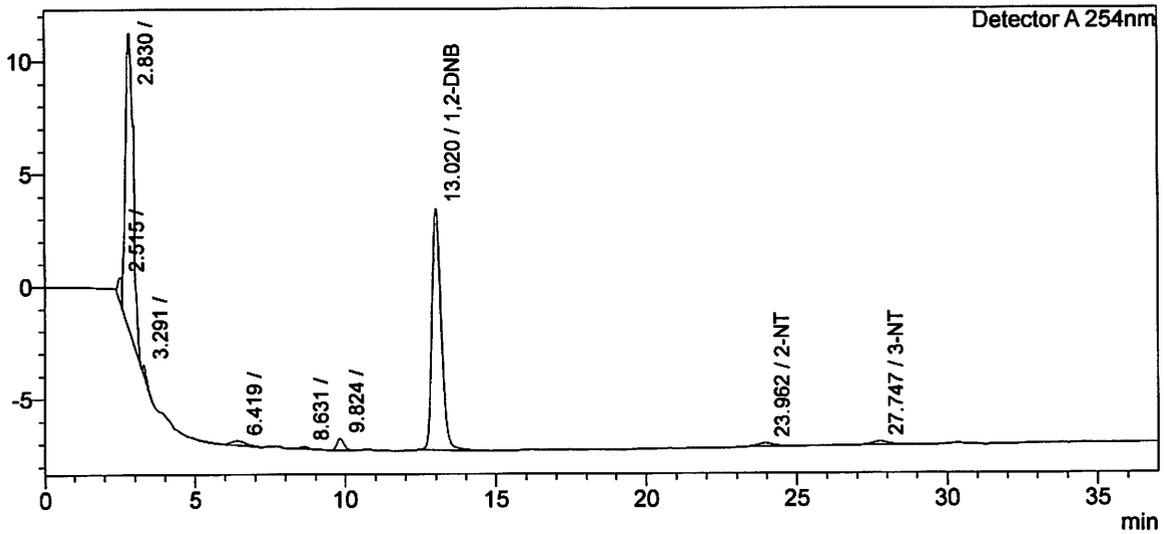
**SHIMADZU**  
**LabSolutions** **Analysis Report**

**<Sample Information>**

Sample Name : MDK0709-13  
 Sample ID :  
 Data Filename : MDK0709-13\_12222023\_038.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122223EXPDR.lcb  
 Vial # : 1-37  
 Injection Volume : 100 uL  
 Date Acquired : 12/23/2023 8:47:02 AM  
 Date Processed : 12/26/2023 3:05:20 PM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

**<Chromatogram>**

mV



**<Peak Table>**

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
7	1,2-DNB	13.020	229421	10734	970.096	mg/L
8	2-NT	23.962	4419	132	20.810	mg/L
9	3-NT	27.747	4959	144	24.067	mg/L
Total			238799	11009		



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LabSolutions

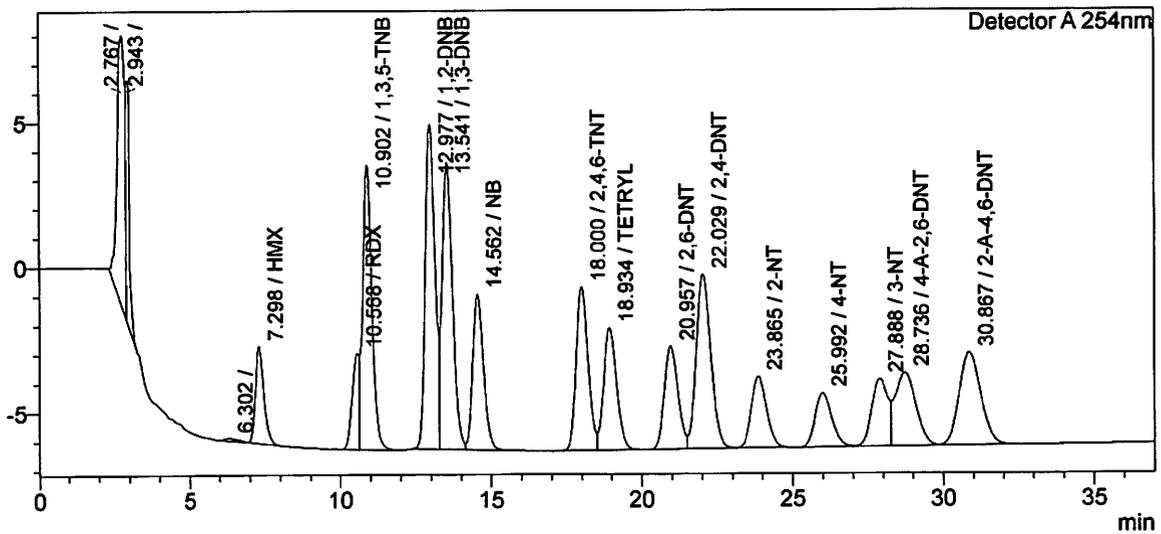
# Analysis Report

## <Sample Information>

Sample Name : CCV 400 ppb  
 Sample ID :  
 Data Filename : CCV 400 ppb\_12222023\_039.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122223EXPDR.lcb  
 Vial # : 1-4  
 Injection Volume : 100 uL  
 Date Acquired : 12/23/2023 9:24:56 AM  
 Date Processed : 12/26/2023 3:05:21 PM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
4	HMX	7.298	64597	3340	396.237	mg/L
5	RDX	10.568	52478	3304	410.646	mg/L
6	1,3,5-TNB	10.902	205638	9789	400.954	mg/L
7	1,2-DNB	12.977	250549	11189	1059.435	mg/L
8	1,3-DNB	13.541	237581	9872	407.740	mg/L
9	NB	14.562	133729	5353	403.680	mg/L
10	2,4,6-TNT	18.000	154756	5617	402.482	mg/L
11	TETRYL	18.934	129120	4204	399.746	mg/L
12	2,6-DNT	20.957	111966	3542	404.775	mg/L
13	2,4-DNT	22.029	202086	5997	401.036	mg/L
14	2-NT	23.865	86092	2449	405.392	mg/L
15	4-NT	25.992	71678	1870	413.402	mg/L
16	3-NT	27.888	88833	2332	431.160	mg/L
17	4-A-2,6-DNT	28.736	119865	2528	385.043	mg/L
18	2-A-4,6-DNT	30.867	159089	3191	400.950	mg/L
Total			2068058	74575		

## ====8330 Batch Table====

Vial#	Sample Name	Sample ID	Sample Type	Method File	Data File	Level#	Report Format File
7	ini		0:Unknown	iods\8330_50B_28C_final.lcm	ini_12262023_001.lcd	0	330_batch_file_report.lsr
1	1000 ppb ICAL		1:Standard:(I)	iods\8330_50B_28C_final.lcm	1000 ppb ICAL_12262023_002.lcd	6	330_batch_file_report.lsr
2	800 ppb ICAL		1:Standard:(R)	iods\8330_50B_28C_final.lcm	800 ppb ICAL_12262023_003.lcd	5	330_batch_file_report.lsr
3	600 ppb ICAL		1:Standard:(R)	iods\8330_50B_28C_final.lcm	600 ppb ICAL_12262023_004.lcd	4	330_batch_file_report.lsr
4	400 ppb ICAL		1:Standard:(R)	iods\8330_50B_28C_final.lcm	400 ppb ICAL_12262023_005.lcd	3	330_batch_file_report.lsr
5	100 ppb ICAL		1:Standard:(R)	iods\8330_50B_28C_final.lcm	100 ppb ICAL_12262023_006.lcd	2	330_batch_file_report.lsr
6	50 ppb ICAL		1:Standard:(R)	iods\8330_50B_28C_final.lcm	50 ppb ICAL_12262023_007.lcd	1	330_batch_file_report.lsr
7	RB		0:Unknown	iods\8330_50B_28C_final.lcm	RB_12262023_008.lcd	0	330_batch_file_report.lsr
8	ICV		0:Unknown	iods\8330_50B_28C_final.lcm	ICV_12262023_009.lcd	0	330_batch_file_report.lsr
9	BDL0072-BLK1		0:Unknown	iods\8330_50B_28C_final.lcm	BDL0072-BLK1_12262023_010.lcd	0	330_batch_file_report.lsr
10	BDL0072-BS1		0:Unknown	iods\8330_50B_28C_final.lcm	BDL0072-BS1_12262023_011.lcd	0	330_batch_file_report.lsr
11	BDL0072-MS1		0:Unknown	iods\8330_50B_28C_final.lcm	BDL0072-MS1_12262023_012.lcd	0	330_batch_file_report.lsr
12	BDL0072-MSD1		0:Unknown	iods\8330_50B_28C_final.lcm	BDL0072-MSD1_12262023_013.lcd	0	330_batch_file_report.lsr
13	BDL0072-MRL1		0:Unknown	iods\8330_50B_28C_final.lcm	BDL0072-MRL1_12262023_014.lcd	0	330_batch_file_report.lsr
14	BDL0072-MRL2		0:Unknown	iods\8330_50B_28C_final.lcm	BDL0072-MRL2_12262023_015.lcd	0	330_batch_file_report.lsr
15	BDL0072-MRL3		0:Unknown	iods\8330_50B_28C_final.lcm	BDL0072-MRL3_12262023_016.lcd	0	330_batch_file_report.lsr
16	MDK0709-10		0:Unknown	iods\8330_50B_28C_final.lcm	MDK0709-10_12262023_017.lcd	0	330_batch_file_report.lsr
17	MDK0709-03		0:Unknown	iods\8330_50B_28C_final.lcm	MDK0709-03_12262023_018.lcd	0	330_batch_file_report.lsr
18	MDK0709-04		0:Unknown	iods\8330_50B_28C_final.lcm	MDK0709-04_12262023_019.lcd	0	330_batch_file_report.lsr
19	MDK0735-01		0:Unknown	iods\8330_50B_28C_final.lcm	MDK0735-01_12262023_020.lcd	0	330_batch_file_report.lsr
20	MDK0735-02		0:Unknown	iods\8330_50B_28C_final.lcm	MDK0735-02_12262023_021.lcd	0	330_batch_file_report.lsr
21	MDK0735-03		0:Unknown	iods\8330_50B_28C_final.lcm	MDK0735-03_12262023_022.lcd	0	330_batch_file_report.lsr
22	BDL0072-MS2		0:Unknown	iods\8330_50B_28C_final.lcm	BDL0072-MS2_12262023_023.lcd	0	330_batch_file_report.lsr
23	BDL0072-MSD2		0:Unknown	iods\8330_50B_28C_final.lcm	BDL0072-MSD2_12262023_024.lcd	0	330_batch_file_report.lsr
24	MDK0735-04		0:Unknown	iods\8330_50B_28C_final.lcm	MDK0735-04_12262023_025.lcd	0	330_batch_file_report.lsr
25	MDK0735-05		0:Unknown	iods\8330_50B_28C_final.lcm	MDK0735-05_12262023_026.lcd	0	330_batch_file_report.lsr
4	CCV 400 ppb		0:Unknown	iods\8330_50B_28C_final.lcm	CCV 400 ppb_12262023_027.lcd	0	330_batch_file_report.lsr
26	MDK0735-06		0:Unknown	iods\8330_50B_28C_final.lcm	MDK0735-06_12262023_028.lcd	0	330_batch_file_report.lsr
27	MDK0735-07		0:Unknown	iods\8330_50B_28C_final.lcm	MDK0735-07_12262023_029.lcd	0	330_batch_file_report.lsr
28	MDK0735-08		0:Unknown	iods\8330_50B_28C_final.lcm	MDK0735-08_12262023_030.lcd	0	330_batch_file_report.lsr
29	MDK0735-09		0:Unknown	iods\8330_50B_28C_final.lcm	MDK0735-09_12262023_031.lcd	0	330_batch_file_report.lsr
30	MDL0022-01		0:Unknown	iods\8330_50B_28C_final.lcm	MDL0022-01_12262023_032.lcd	0	330_batch_file_report.lsr
31	MDL0022-02		0:Unknown	iods\8330_50B_28C_final.lcm	MDL0022-02_12262023_033.lcd	0	330_batch_file_report.lsr
32	MDL0022-03		0:Unknown	iods\8330_50B_28C_final.lcm	MDL0022-03_12262023_034.lcd	0	330_batch_file_report.lsr
33	MDL0022-04		0:Unknown	iods\8330_50B_28C_final.lcm	MDL0022-04_12262023_035.lcd	0	330_batch_file_report.lsr
34	MDL0022-05		0:Unknown	iods\8330_50B_28C_final.lcm	MDL0022-05_12262023_036.lcd	0	330_batch_file_report.lsr
35	MDL0022-06		0:Unknown	iods\8330_50B_28C_final.lcm	MDL0022-06_12262023_037.lcd	0	330_batch_file_report.lsr
4	CCV 400 ppb		0:Unknown	iods\8330_50B_28C_final.lcm	CCV 400 ppb_12262023_038.lcd	0	330_batch_file_report.lsr

Vial#	Sample Name	Sample ID	Sample Type	Method File	Data File	Level#	Report Format File
36	MDL0022-07		0:Unknown	ods\8330_50B_28C_final.lcm	MDL0022-07_12262023_039.lcd	0	330_batch_file_report.lsr
37	MDL0022-09		0:Unknown	ods\8330_50B_28C_final.lcm	MDL0022-09_12262023_040.lcd	0	330_batch_file_report.lsr
38	MDL0022-10		0:Unknown	ods\8330_50B_28C_final.lcm	MDL0022-10_12262023_041.lcd	0	330_batch_file_report.lsr
4	CCV 400 ppb		0:Unknown	ods\8330_50B_28C_final.lcm	CCV 400 ppb_12262023_042.lcd	0	330_batch_file_report.lsr
39	BDL0072-BLK2		0:Unknown	ods\8330_50B_28C_final.lcm	BDL0072-BLK2_12262023_043.lcd	0	330_batch_file_report.lsr
40	BDL0072-BS2		0:Unknown	ods\8330_50B_28C_final.lcm	BDL0072-BS2_12262023_044.lcd	0	330_batch_file_report.lsr
41	MDL0102-01		0:Unknown	ods\8330_50B_28C_final.lcm	MDL0102-01_12262023_045.lcd	0	330_batch_file_report.lsr
42	MDL0102-02		0:Unknown	ods\8330_50B_28C_final.lcm	MDL0102-02_12262023_046.lcd	0	330_batch_file_report.lsr
43	MDL0103-01		0:Unknown	ods\8330_50B_28C_final.lcm	MDL0103-01_12262023_047.lcd	0	330_batch_file_report.lsr
44	MDL0103-02		0:Unknown	ods\8330_50B_28C_final.lcm	MDL0103-02_12262023_048.lcd	0	330_batch_file_report.lsr
4	CCV 400 ppb		0:Unknown	ods\8330_50B_28C_final.lcm	CCV 400 ppb_12262023_049.lcd	0	330_batch_file_report.lsr
7	shutdown		0:Unknown	23 Methods\SHUTDOWN.lcm	shutdown_12262023_050.lcd	0	ons\System\DEFAULT.lsr

**Method: 8330B**  
**Solvent: Acetonitrile**  
**Instrument: HPLC**  
**Ext. Method: RDX SPE**

Surrogate(s)	Solution #	Concentration (ppm)
1,2-Dinitrobenzene	2303346	1000
<b>Matrix Spiking Info (MS/MSD)</b>		
Matrix Spiking Info (MS/MSD)	Solution #	Concentration (ppm)
EPA 8330 Mix #1	2303409	100
EPA 8330 Mix #2	2303410	100

Sample #	Amount Ext. (g/mL)	Matrix	S (µl)	MS1 (µl)	MS2 (µl)	FV (ml)
BDL0072-BLK1	1000	W	10			10
BDL0072-BS1	1000	W	10	50	50	10
BDL0072-MS1	1000	W	10	50	50	10
BDL0072-MSD1	1000	W	10	50	50	10
MDK0709-10	1000	W	10			10
MDK0709-03	1000	W	10			10
MDK0709-04	1000	W	10			10
MDK0735-01	1000	W	10			10
MDK0735-02	1000	W	10			10
MDK0735-03	1000	W	10			10
BDL0072-MS1	1000	W	10	50	50	10
BDL0072-MSD1	1000	W	10	50	50	10
MDK0735-04	1000	W	10			10
MDK0735-05	1000	W	10			10
MDK0735-06	1000	W	10			10
MDK0735-07	1000	W	10			10
MDK0735-08	1000	W	10			10
MDK0735-09	1000	W	10			10
MDL0022-01	1000	W	10			10
MDL0022-02	1000	W	10			10
MDL0022-03	1000	W	10			10
MDL0022-04	1000	W	10			10
MDL0022-05	1000	W	10			10
MDL0022-06	1000	W	10			10
MDL0022-07	1000	W	10			10
MDL0022-09	1000	W	10			10
MDL0022-10	1000	W	10			10

Reagent/Solution Desc.	Acetonitrile	RDX SPE	MeOH					
Reagent/Solution #	See Element	See Element	See Element					

Method: 8330B  
 Solvent: Acetonitrile  
 Instrument: HPLC  
 Ext. Method: RDX SPE

Surrogate(s)	Solution #	Concentration (ppm)
1,2-Dinitrobenzene	2303346	1000
<b>Matrix Spiking Info (MS/MSD)</b>		
Matrix Spiking Info (MS/MSD)	Solution #	Concentration (ppm)
EPA 8330 Mix #1	2303409	100
EPA 8330 Mix #2	2303410	100

Sample #	Amount Ext. (g/mL)	Matrix	S (µl)	MS1 (µl)	MS2 (µl)	FV (ml)
BDL0072-BLK2	1000	W	10			10
BDL0072-BS2	1000	W	10	50	50	10
MDL0102-01	1000	W	10			10
MDL0102-02	1000	W	10			10
MDL0103-01	1000	W	10			10
MDL0103-02	1000	W	10			10

Reagent/Solution Desc.	Acetonitrile	RDX SPE	MeOH					
Reagent/Solution #	See Element	See Element	See Element					

Comments: \_\_\_\_\_



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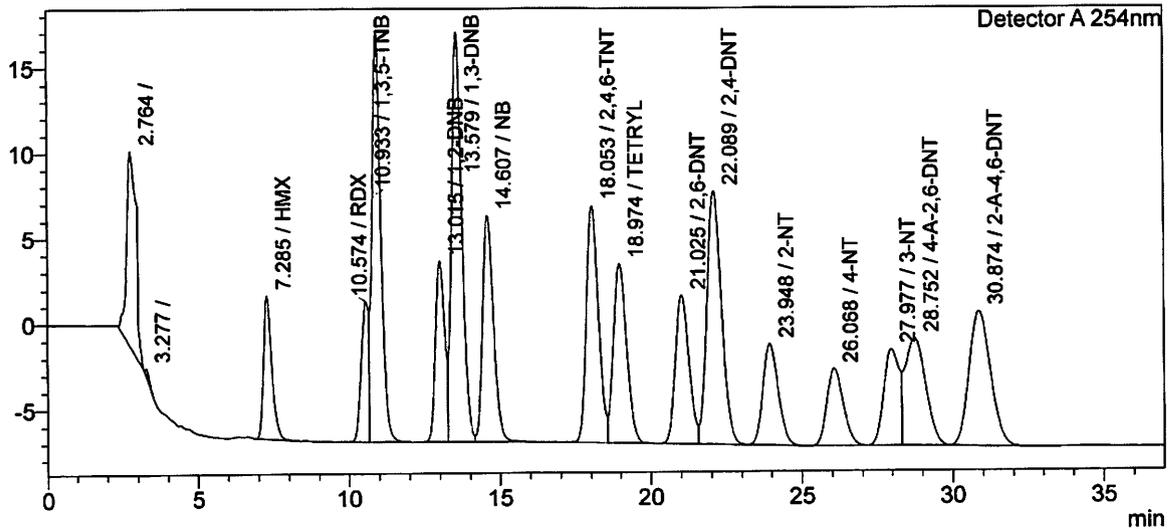
# Analysis Report

## <Sample Information>

Sample Name	: 1000 ppb ICAL	Sample Type	: Standard
Sample ID	:	Level	: 6
Data Filename	: 1000 ppb ICAL_12262023_002.lcd	Acquired by	: System Administrator
Method Filename	: 8330_50B_28C_final.lcm	Processed by	: System Administrator
Batch Filename	: 122623EXP.lcb		
Vial #	: 1-1		
Injection Volume	: 100 uL		
Date Acquired	: 12/26/2023 4:01:32 PM		
Date Processed	: 12/26/2023 4:38:33 PM		

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
3	HMX	7.285	158456	8383	1000.000	mg/L
4	RDX	10.574	140759	8176	1000.000	mg/L
5	1,3,5-TNB	10.933	488587	23878	1000.000	mg/L
6	1,2-DNB	13.015	225828	10553	1000.000	mg/L
7	1,3-DNB	13.579	566622	23953	1000.000	mg/L
8	NB	14.607	328679	13241	1000.000	mg/L
9	2,4,6-TNT	18.053	381927	13864	1000.000	mg/L
10	TETRYL	18.974	322904	10471	1000.000	mg/L
11	2,6-DNT	21.025	274982	8704	1000.000	mg/L
12	2,4-DNT	22.089	498991	14825	1000.000	mg/L
13	2-NT	23.948	208806	5937	1000.000	mg/L
14	4-NT	26.068	171702	4535	1000.000	mg/L
15	3-NT	27.977	210325	5666	1000.000	mg/L
16	4-A-2,6-DNT	28.752	295804	6309	1000.000	mg/L
17	2-A-4,6-DNT	30.874	392322	7912	1000.000	mg/L
Total			4666695	166406		



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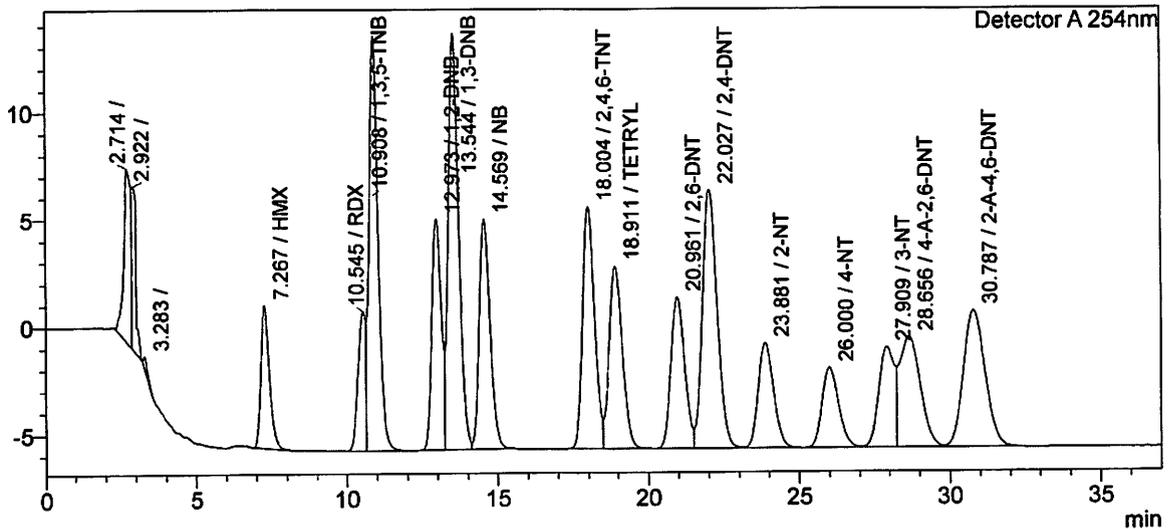
## Analysis Report

## &lt;Sample Information&gt;

Sample Name : 800 ppb ICAL  
 Sample ID :  
 Data Filename : 800 ppb ICAL\_12262023\_003.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-2  
 Injection Volume : 100 uL  
 Date Acquired : 12/26/2023 4:38:58 PM  
 Date Processed : 12/26/2023 5:15:58 PM  
 Sample Type : Standard  
 Level : 5  
 Acquired by : System Administrator  
 Processed by : System Administrator

## &lt;Chromatogram&gt;

mV



## &lt;Peak Table&gt;

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
4	HMX	7.267	129592	6659	810.785	mg/L
5	RDX	10.545	113817	6476	805.220	mg/L
6	1,3,5-TNB	10.908	401278	19292	812.856	mg/L
7	1,2-DNB	12.973	233758	10733	1017.255	mg/L
8	1,3-DNB	13.544	464575	19384	812.019	mg/L
9	NB	14.569	266810	10696	807.133	mg/L
10	2,4,6-TNT	18.004	310007	11260	807.089	mg/L
11	TETRYL	18.911	262235	8479	807.344	mg/L
12	2,6-DNT	20.961	223702	7052	808.186	mg/L
13	2,4-DNT	22.027	407632	12047	810.228	mg/L
14	2-NT	23.881	173320	4884	818.061	mg/L
15	4-NT	26.000	142867	3732	819.253	mg/L
16	3-NT	27.909	174327	4689	817.345	mg/L
17	4-A-2,6-DNT	28.656	243433	5134	813.842	mg/L
18	2-A-4,6-DNT	30.787	317902	6372	806.255	mg/L
Total			3865257	136888		



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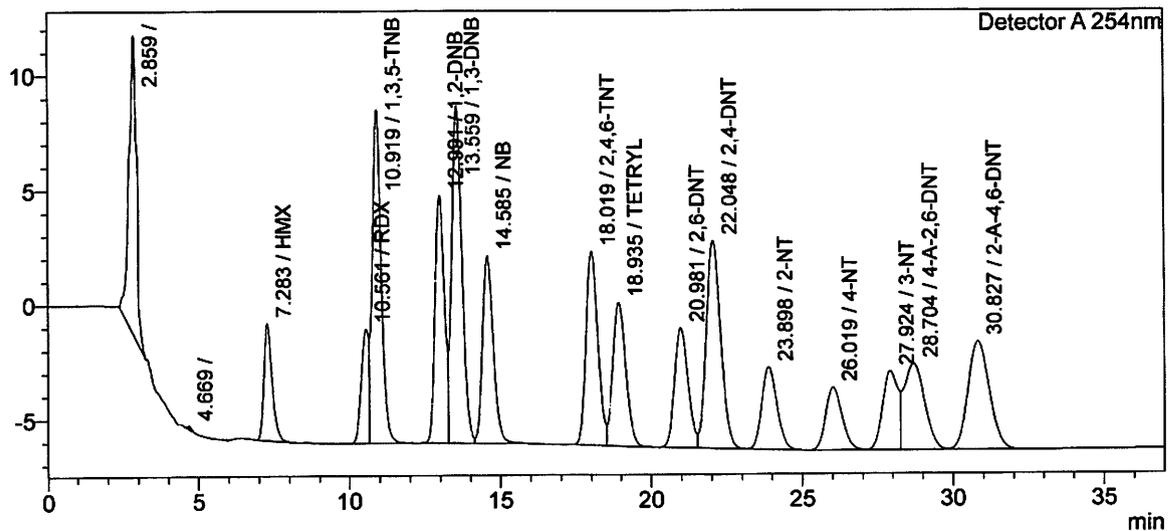
## Analysis Report

## &lt;Sample Information&gt;

Sample Name : 600 ppb ICAL  
 Sample ID :  
 Data Filename : 600 ppb ICAL\_12262023\_004.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-3  
 Injection Volume : 100 µL  
 Date Acquired : 12/26/2023 5:16:23 PM  
 Date Processed : 12/26/2023 5:53:23 PM  
 Sample Type : Standard  
 Level : 4  
 Acquired by : System Administrator  
 Processed by : System Administrator

## &lt;Chromatogram&gt;

mV



## &lt;Peak Table&gt;

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
3	HMX	7.283	96230	5110	601.687	mg/L
4	RDX	10.561	84222	4980	596.586	mg/L
5	1,3,5-TNB	10.919	296796	14543	600.993	mg/L
6	1,2-DNB	12.991	233321	10810	1010.184	mg/L
7	1,3-DNB	13.559	347440	14739	605.959	mg/L
8	NB	14.585	202264	8171	609.701	mg/L
9	2,4,6-TNT	18.019	230566	8456	600.219	mg/L
10	TETRYL	18.935	191000	6267	590.152	mg/L
11	2,6-DNT	20.981	163103	5229	591.160	mg/L
12	2,4-DNT	22.048	301804	9077	599.901	mg/L
13	2-NT	23.898	125642	3607	594.267	mg/L
14	4-NT	26.019	104735	2760	600.484	mg/L
15	3-NT	27.924	127460	3453	598.034	mg/L
16	4-A-2,6-DNT	28.704	177089	3788	593.458	mg/L
17	2-A-4,6-DNT	30.827	233982	4757	594.593	mg/L
Total			2915656	105747		



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## Analysis Report

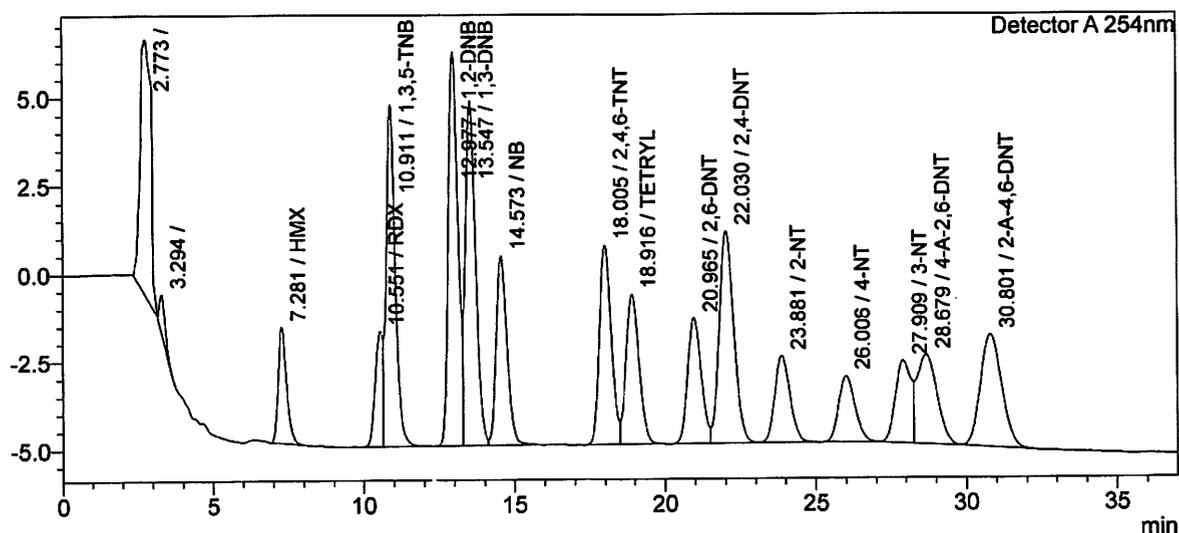
## &lt;Sample Information&gt;

Sample Name : 400 ppb ICAL  
 Sample ID :  
 Data Filename : 400 ppb ICAL\_12262023\_005.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-4  
 Injection Volume : 100 uL  
 Date Acquired : 12/26/2023 5:53:49 PM  
 Date Processed : 12/26/2023 6:30:50 PM

Sample Type : Standard  
 Level : 3  
 Acquired by : System Administrator  
 Processed by : System Administrator

## &lt;Chromatogram&gt;

mV



## &lt;Peak Table&gt;

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
3	HMX	7.281	63348	3325	396.373	mg/L
4	RDX	10.551	56845	3283	402.465	mg/L
5	1,3,5-TNB	10.911	201044	9717	406.566	mg/L
6	1,2-DNB	12.977	248639	11196	1056.300	mg/L
7	1,3-DNB	13.547	231208	9811	403.000	mg/L
8	NB	14.573	134343	5403	404.589	mg/L
9	2,4,6-TNT	18.005	154905	5674	403.012	mg/L
10	TETRYL	18.916	129991	4272	401.522	mg/L
11	2,6-DNT	20.965	112727	3587	407.927	mg/L
12	2,4-DNT	22.030	202562	6045	402.440	mg/L
13	2-NT	23.881	86552	2472	408.669	mg/L
14	4-NT	26.006	71336	1885	408.313	mg/L
15	3-NT	27.909	87153	2351	408.243	mg/L
16	4-A-2,6-DNT	28.679	117404	2542	393.919	mg/L
17	2-A-4,6-DNT	30.801	157574	3212	400.394	mg/L
Total			2055630	74775		



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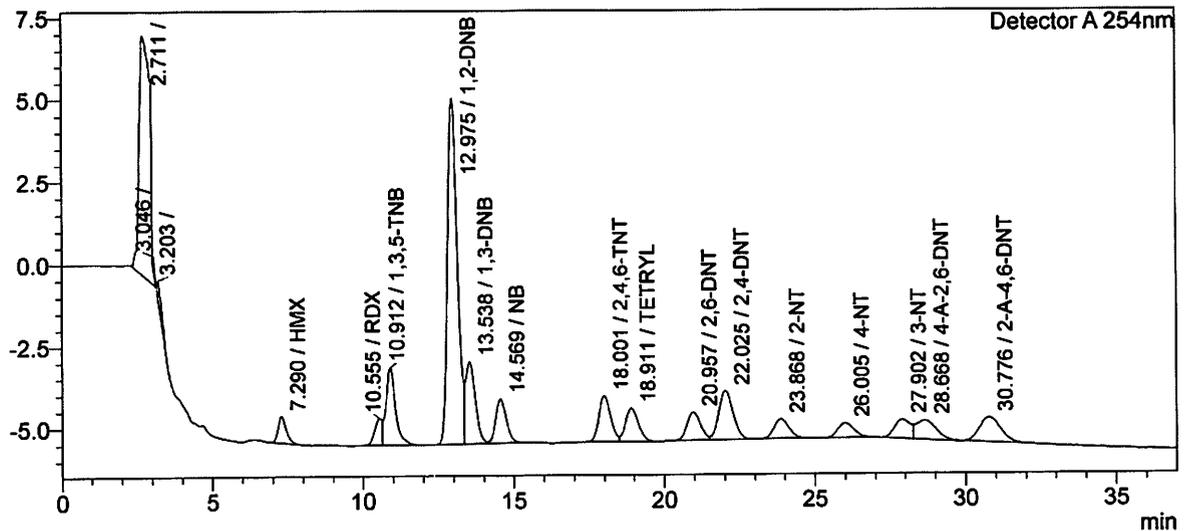
# Analysis Report

## <Sample Information>

Sample Name : 100 ppb ICAL  
 Sample ID :  
 Data Filename : 100 ppb ICAL\_12262023\_006.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-5  
 Injection Volume : 100 µL  
 Date Acquired : 12/26/2023 6:31:15 PM  
 Date Processed : 12/26/2023 7:08:16 PM  
 Sample Type : Standard  
 Level : 2  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
4	HMX	7.290	15459	812	96.741	mg/L
5	RDX	10.555	13640	807	96.588	mg/L
6	1,3,5-TNB	10.912	50726	2369	102.569	mg/L
7	1,2-DNB	12.975	237739	10517	1007.979	mg/L
8	1,3-DNB	13.538	55887	2509	97.424	mg/L
9	NB	14.569	32363	1338	97.475	mg/L
10	2,4,6-TNT	18.001	37636	1391	97.927	mg/L
11	TETRYL	18.911	30451	1006	94.084	mg/L
12	2,6-DNT	20.957	26248	854	95.006	mg/L
13	2,4-DNT	22.025	49034	1485	97.431	mg/L
14	2-NT	23.868	19974	593	94.334	mg/L
15	4-NT	26.005	16257	442	93.084	mg/L
16	3-NT	27.902	22384	591	104.827	mg/L
17	4-A-2,6-DNT	28.668	26377	583	88.548	mg/L
18	2-A-4,6-DNT	30.776	36358	749	92.417	mg/L
Total			670532	26048		



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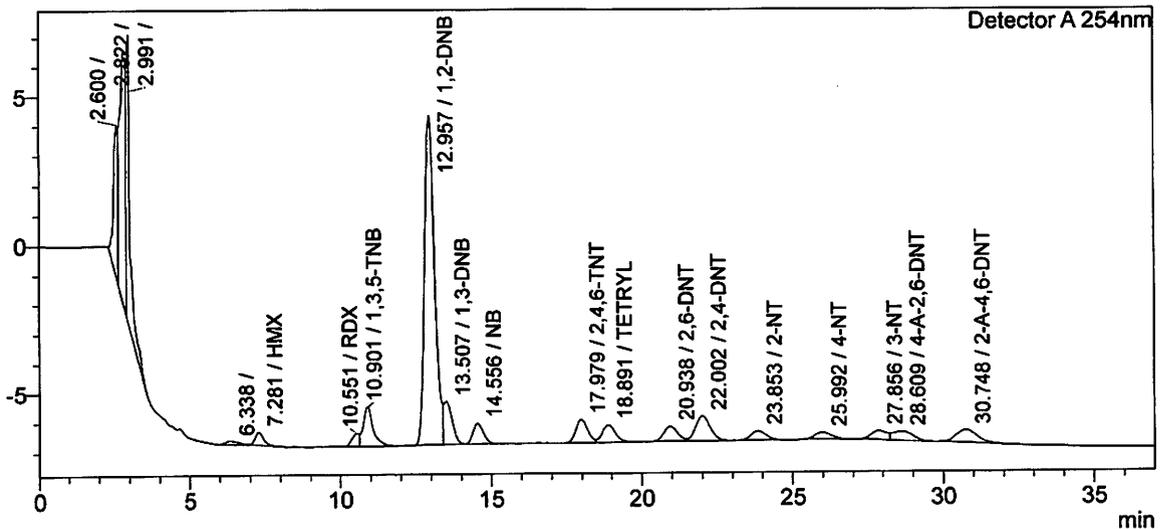
# Analysis Report

## <Sample Information>

Sample Name : 50 ppb ICAL  
 Sample ID :  
 Data Filename : 50 ppb ICAL\_12262023\_007.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-6  
 Injection Volume : 100 µL  
 Date Acquired : 12/26/2023 7:08:42 PM  
 Date Processed : 12/26/2023 7:45:42 PM  
 Sample Type : Standard  
 Level : 1  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
5	HMX	7.281	8615	435	53.908	mg/L
6	RDX	10.551	7398	441	52.383	mg/L
7	1,3,5-TNB	10.901	30559	1335	61.774	mg/L
8	1,2-DNB	12.957	257023	11120	1073.683	mg/L
9	1,3-DNB	13.507	28330	1450	49.386	mg/L
10	NB	14.556	16606	690	50.018	mg/L
11	2,4,6-TNT	17.979	20970	777	54.555	mg/L
12	TETRYL	18.891	17402	579	53.762	mg/L
13	2,6-DNT	20.938	15356	498	55.576	mg/L
14	2,4-DNT	22.002	27910	838	55.451	mg/L
15	2-NT	23.853	10223	306	48.286	mg/L
16	4-NT	25.992	7972	223	45.650	mg/L
17	3-NT	27.856	10748	295	50.333	mg/L
18	4-A-2,6-DNT	28.609	14051	309	47.172	mg/L
19	2-A-4,6-DNT	30.748	20661	428	52.514	mg/L
Total			493824	19722		



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# Analysis Report

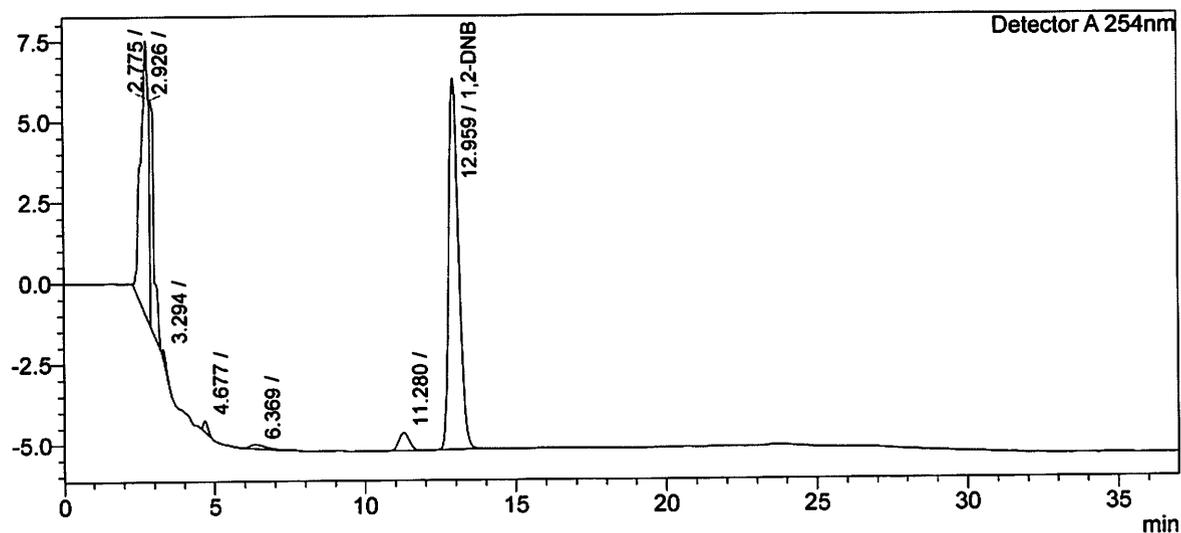
## <Sample Information>

Sample Name : RB  
 Sample ID :  
 Data Filename : RB\_12262023\_008.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-7  
 Injection Volume : 100 uL  
 Date Acquired : 12/26/2023 7:46:08 PM  
 Date Processed : 12/26/2023 8:23:09 PM

Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
7	1,2-DNB	12.959	261041	11499	1090.466	mg/L
Total			261041	11499		



SHIMADZU

LabSolutions

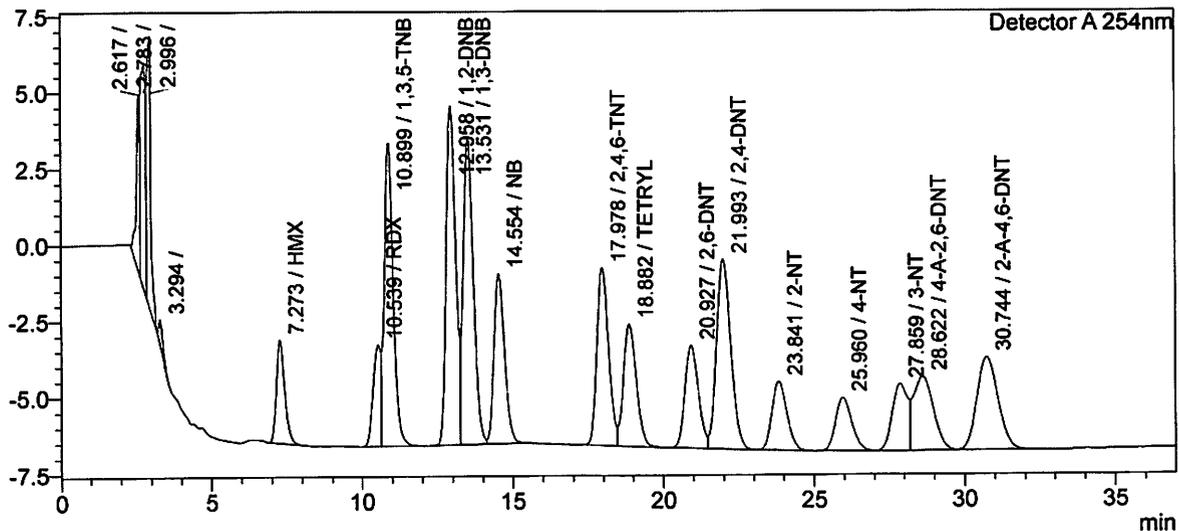
# Analysis Report

## <Sample Information>

Sample Name : ICV  
 Sample ID :  
 Data Filename : ICV\_12262023\_009.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-8  
 Injection Volume : 100 uL  
 Date Acquired : 12/26/2023 8:23:35 PM  
 Date Processed : 12/26/2023 9:00:36 PM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
5	HMX	7.273	64537	3379	403.842	mg/L
6	RDX	10.539	58682	3321	415.513	mg/L
7	1,3,5-TNB	10.899	202039	9923	408.420	mg/L
8	1,2-DNB	12.958	243766	11092	1018.304	mg/L
9	1,3-DNB	13.531	235085	10045	409.811	mg/L
10	NB	14.554	135203	5564	407.226	mg/L
11	2,4,6-TNT	17.978	156286	5819	406.603	mg/L
12	TETRYL	18.882	121793	4009	376.271	mg/L
13	2,6-DNT	20.927	104273	3364	377.372	mg/L
14	2,4-DNT	21.993	204861	6223	407.005	mg/L
15	2-NT	23.841	77170	2244	364.481	mg/L
16	4-NT	25.960	64460	1731	369.113	mg/L
17	3-NT	27.859	79837	2184	373.887	mg/L
18	4-A-2,6-DNT	28.622	110653	2415	371.489	mg/L
19	2-A-4,6-DNT	30.744	147394	3043	374.636	mg/L
Total			2006040	74353		



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LabSolutions

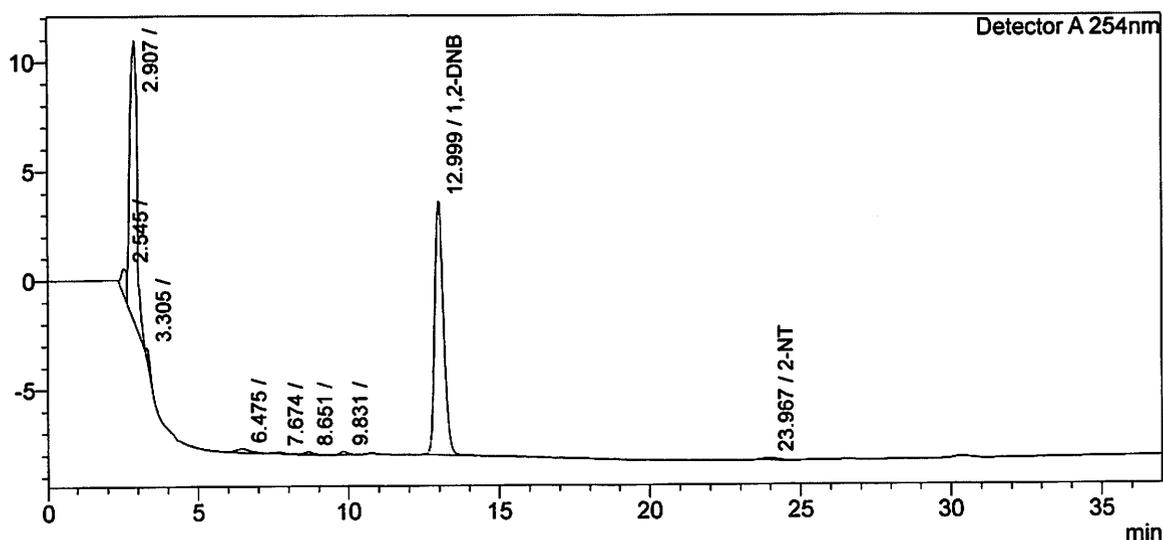
# Analysis Report

## <Sample Information>

Sample Name : BDL0072-BLK1  
 Sample ID :  
 Data Filename : BDL0072-BLK1\_12262023\_010.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-9  
 Injection Volume : 100 uL  
 Date Acquired : 12/26/2023 9:01:01 PM  
 Date Processed : 12/26/2023 9:38:02 PM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
8	1,2-DNB	12.999	234532	11624	979.727	mg/L
9	2-NT	23.967	2645	84	12.490	mg/L
Total			237176	11708		



SHIMADZU

LabSolutions

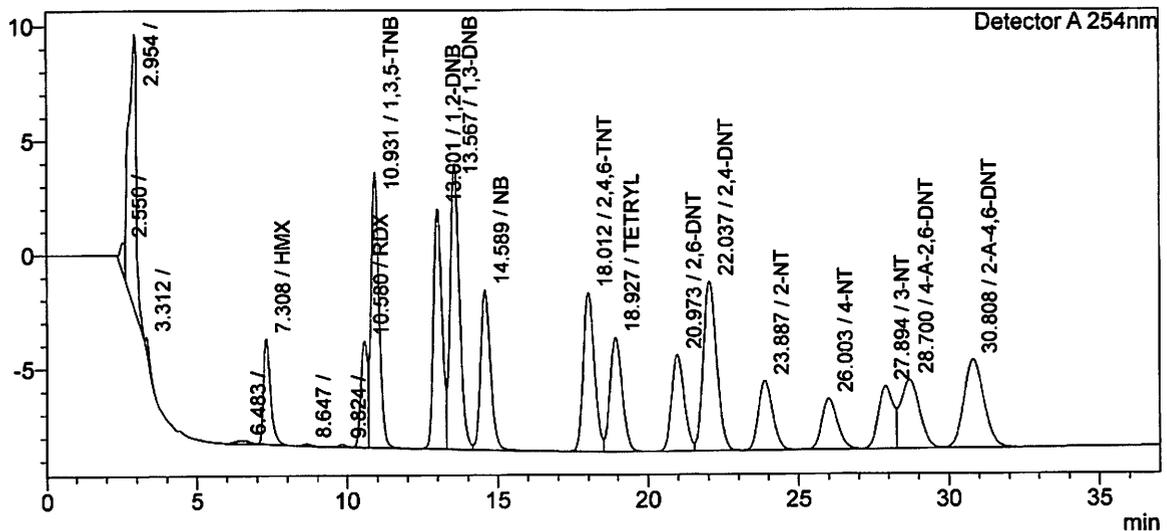
## Analysis Report

## &lt;Sample Information&gt;

Sample Name : BDL0072-BS1  
 Sample ID :  
 Data Filename : BDL0072-BS1\_12262023\_011.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-10  
 Injection Volume : 100 uL  
 Date Acquired : 12/26/2023 9:38:28 PM  
 Date Processed : 12/26/2023 10:15:28 PM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## &lt;Chromatogram&gt;

mV



## &lt;Peak Table&gt;

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
5	HMX	7.308	73984	4567	462.957	mg/L
8	RDX	10.580	72260	4607	511.652	mg/L
9	1,3,5-TNB	10.931	216873	12033	438.406	mg/L
10	1,2-DNB	13.001	205872	10492	860.006	mg/L
11	1,3-DNB	13.567	266603	12478	464.757	mg/L
12	NB	14.589	157864	6973	475.480	mg/L
13	2,4,6-TNT	18.012	176591	6912	459.428	mg/L
14	TETRYL	18.927	140328	4947	433.535	mg/L
15	2,6-DNT	20.973	122177	4182	442.168	mg/L
16	2,4-DNT	22.037	227930	7387	452.836	mg/L
17	2-NT	23.887	99034	3012	467.742	mg/L
18	4-NT	26.003	78923	2197	451.931	mg/L
19	3-NT	27.894	96897	2722	453.781	mg/L
20	4-A-2,6-DNT	28.700	129980	2990	436.375	mg/L
21	2-A-4,6-DNT	30.808	177514	3832	451.192	mg/L
Total			2242829	89332		



SHIMADZU

LabSolutions

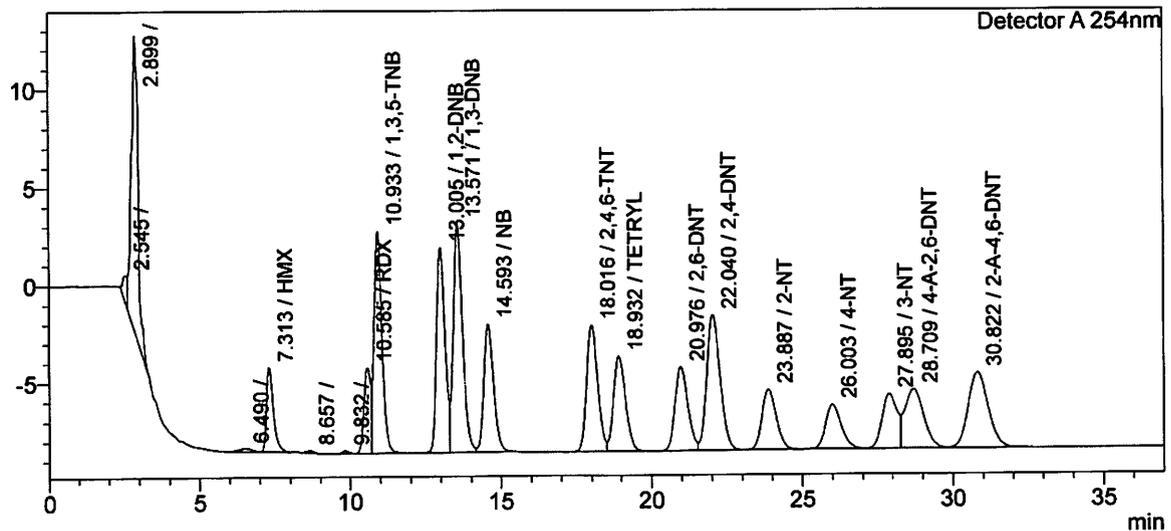
# Analysis Report

## <Sample Information>

Sample Name : BDL0072-MS1  
 Sample ID :  
 Data Filename : BDL0072-MS1\_12262023\_012.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-11  
 Injection Volume : 100 µL  
 Date Acquired : 12/26/2023 10:15:54 PM  
 Date Processed : 12/26/2023 10:52:54 PM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
4	HMX	7.313	68803	4296	430.535	mg/L
7	RDX	10.585	66963	4369	474.149	mg/L
8	1,3,5-TNB	10.933	204395	11351	413.182	mg/L
9	1,2-DNB	13.005	204834	10483	855.667	mg/L
10	1,3-DNB	13.571	247923	11703	432.191	mg/L
11	NB	14.593	146300	6546	440.652	mg/L
12	2,4,6-TNT	18.016	164255	6463	427.335	mg/L
13	TETRYL	18.932	136257	4841	420.956	mg/L
14	2,6-DNT	20.976	126022	4268	456.084	mg/L
15	2,4-DNT	22.040	213317	6932	423.804	mg/L
16	2-NT	23.887	100487	3075	474.607	mg/L
17	4-NT	26.003	80505	2247	460.990	mg/L
18	3-NT	27.895	99654	2786	466.692	mg/L
19	4-A-2,6-DNT	28.709	129922	3014	436.182	mg/L
20	2-A-4,6-DNT	30.822	177203	3859	450.401	mg/L
Total			2166840	86234		





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LabSolutions

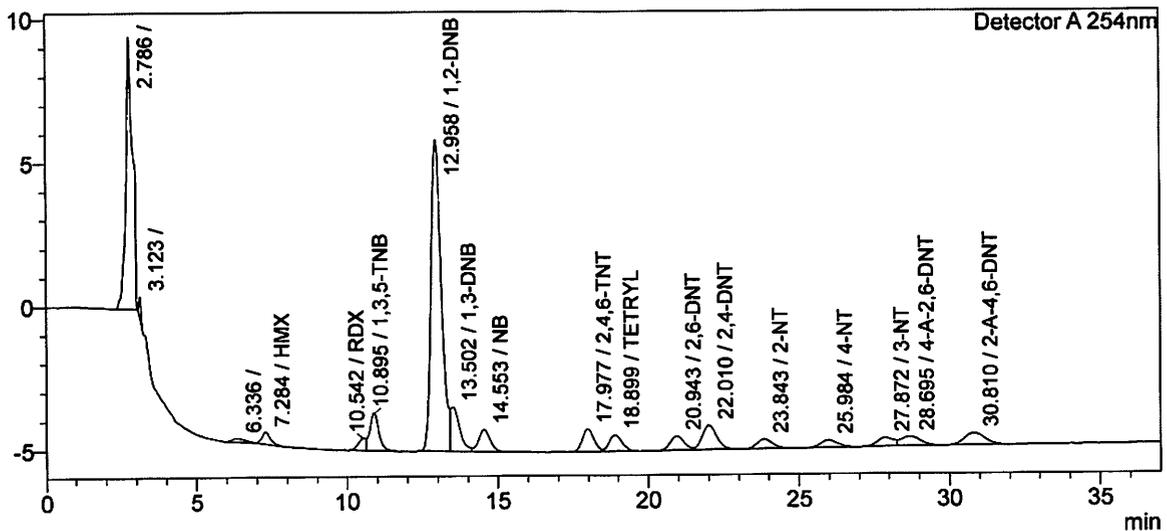
## Analysis Report

## &lt;Sample Information&gt;

Sample Name : BDL0072-MRL1  
 Sample ID :  
 Data Filename : BDL0072-MRL1\_12262023\_014.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-13  
 Injection Volume : 100 uL  
 Date Acquired : 12/26/2023 11:30:46 PM  
 Date Processed : 12/27/2023 12:07:46 AM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## &lt;Chromatogram&gt;

mV



## &lt;Peak Table&gt;

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
4	HMX	7.284	8196	406	51.285	mg/L
5	RDX	10.542	7011	416	49.640	mg/L
6	1,3,5-TNB	10.895	27238	1304	55.061	mg/L
7	1,2-DNB	12.958	256884	10853	1073.102	mg/L
8	1,3-DNB	13.502	32282	1538	56.275	mg/L
9	NB	14.553	20016	763	60.287	mg/L
10	2,4,6-TNT	17.977	20698	779	53.850	mg/L
11	TETRYL	18.899	16942	568	52.342	mg/L
12	2,6-DNT	20.943	15387	492	55.686	mg/L
13	2,4-DNT	22.010	27545	835	54.724	mg/L
14	2-NT	23.843	10976	324	51.841	mg/L
15	4-NT	25.984	9325	252	53.399	mg/L
16	3-NT	27.872	11157	297	52.249	mg/L
17	4-A-2,6-DNT	28.695	14538	323	48.809	mg/L
18	2-A-4,6-DNT	30.810	19278	412	48.998	mg/L
Total			497472	19560		



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LabSolutions

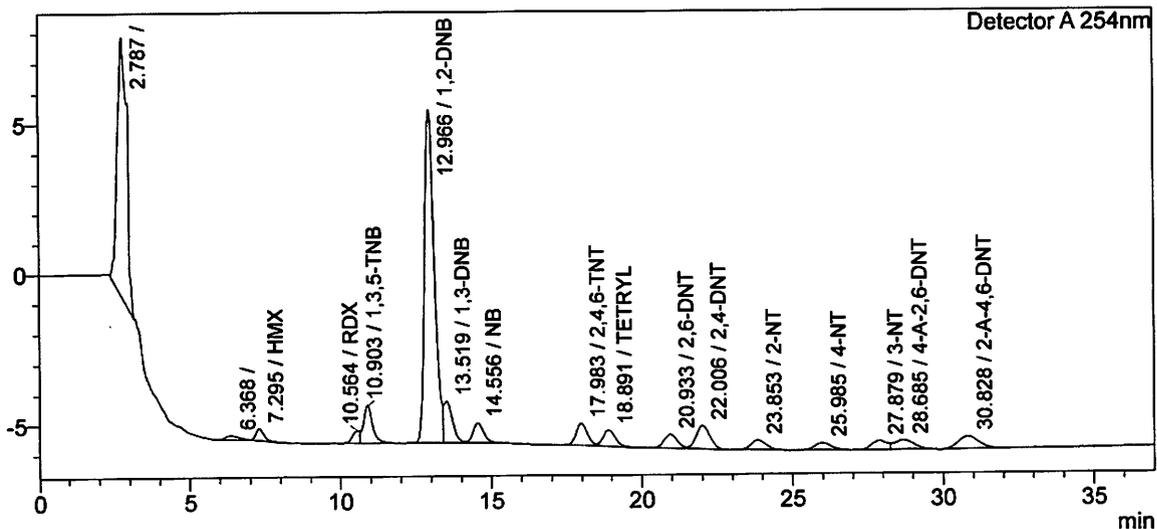
## Analysis Report

## &lt;Sample Information&gt;

Sample Name : BDL0072-MRL2  
 Sample ID :  
 Data Filename : BDL0072-MRL2\_12262023\_015.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-14  
 Injection Volume : 100 uL  
 Date Acquired : 12/27/2023 12:08:12 AM  
 Date Processed : 12/27/2023 12:45:12 AM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## &lt;Chromatogram&gt;

mV



## &lt;Peak Table&gt;

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
3	HMX	7.295	7193	394	45.008	mg/L
4	RDX	10.564	6898	411	48.839	mg/L
5	1,3,5-TNB	10.903	25777	1243	52.108	mg/L
6	1,2-DNB	12.966	248336	11074	1037.393	mg/L
7	1,3-DNB	13.519	27513	1365	47.962	mg/L
8	NB	14.556	16182	656	48.738	mg/L
9	2,4,6-TNT	17.983	18615	717	48.429	mg/L
10	TETRYL	18.891	15894	537	49.104	mg/L
11	2,6-DNT	20.933	13773	462	49.848	mg/L
12	2,4-DNT	22.006	24479	770	48.633	mg/L
13	2-NT	23.853	9985	307	47.161	mg/L
14	4-NT	25.985	8343	236	47.772	mg/L
15	3-NT	27.879	11103	307	51.997	mg/L
16	4-A-2,6-DNT	28.685	13868	315	46.557	mg/L
17	2-A-4,6-DNT	30.828	19241	413	48.904	mg/L
Total			467198	19207		



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LabSolutions

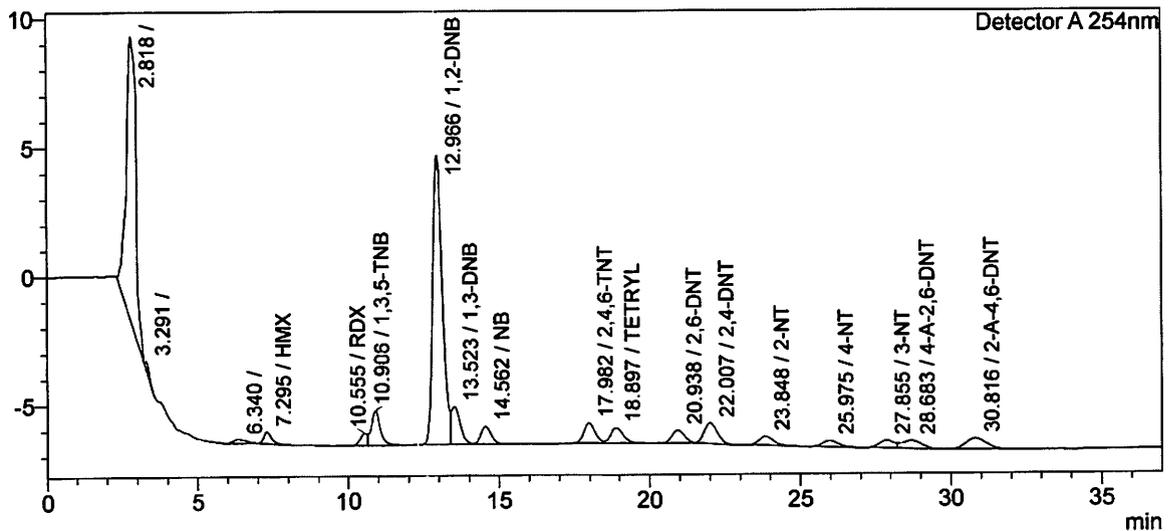
## Analysis Report

## &lt;Sample Information&gt;

Sample Name : BDL0072-MRL3  
 Sample ID :  
 Data Filename : BDL0072-MRL3\_12262023\_016.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-15  
 Injection Volume : 100 uL  
 Date Acquired : 12/27/2023 12:45:38 AM  
 Date Processed : 12/27/2023 1:22:38 AM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## &lt;Chromatogram&gt;

mV



## &lt;Peak Table&gt;

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
4	HMX	7.295	8071	436	50.506	mg/L
5	RDX	10.555	7256	451	51.377	mg/L
6	1,3,5-TNB	10.906	26933	1327	54.445	mg/L
7	1,2-DNB	12.966	247142	11224	1032.405	mg/L
8	1,3-DNB	13.523	29371	1448	51.201	mg/L
9	NB	14.562	16212	685	48.830	mg/L
10	2,4,6-TNT	17.982	20193	778	52.534	mg/L
11	TETRYL	18.897	17453	592	53.919	mg/L
12	2,6-DNT	20.938	13840	490	50.089	mg/L
13	2,4-DNT	22.007	24185	794	48.049	mg/L
14	2-NT	23.848	11481	348	54.224	mg/L
15	4-NT	25.975	8639	249	49.471	mg/L
16	3-NT	27.855	10054	300	47.083	mg/L
17	4-A-2,6-DNT	28.683	14066	313	47.222	mg/L
18	2-A-4,6-DNT	30.816	19395	424	49.298	mg/L
Total			474290	19857		

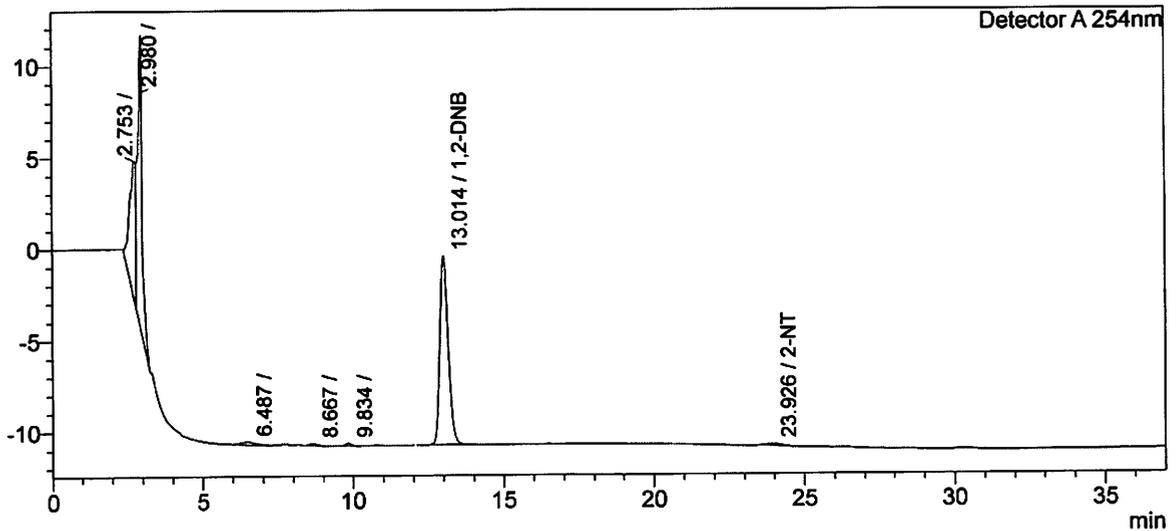
**SHIMADZU**  
**LabSolutions Analysis Report**

**<Sample Information>**

Sample Name : MDK0709-10  
 Sample ID :  
 Data Filename : MDK0709-10\_12262023\_017.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-16  
 Injection Volume : 100 uL  
 Date Acquired : 12/27/2023 1:23:04 AM  
 Date Processed : 12/27/2023 2:00:04 AM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

**<Chromatogram>**

mV



**<Peak Table>**

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
6	1,2-DNB	13.014	198827	10311	830.577	mg/L
7	2-NT	23.926	2990	100	14.121	mg/L
Total			201817	10411		



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LabSolutions

# Analysis Report

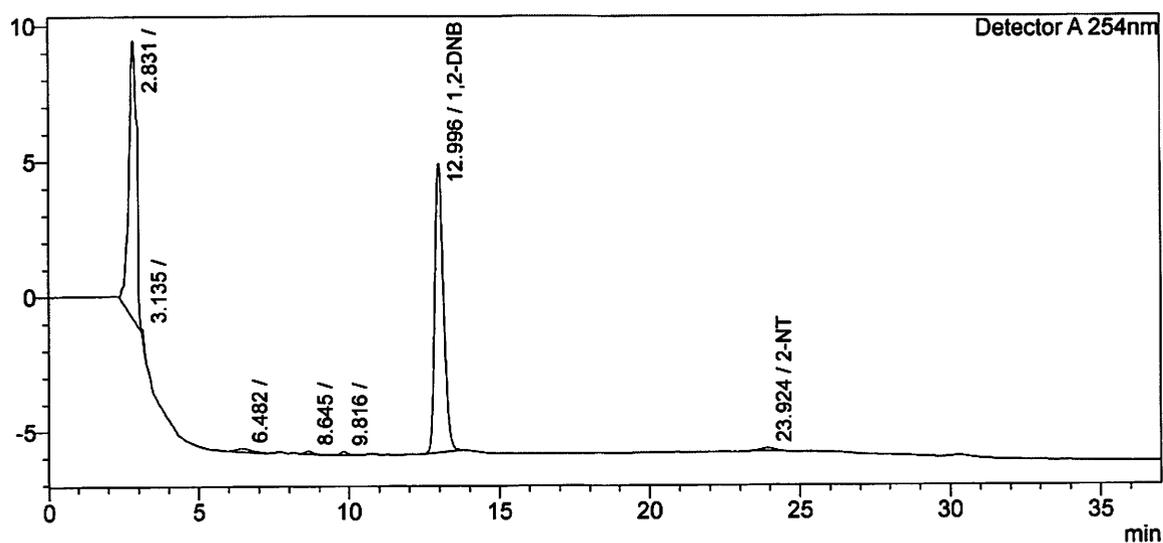
## <Sample Information>

Sample Name : MDK0709-03  
 Sample ID :  
 Data Filename : MDK0709-03\_12262023\_018.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-17  
 Injection Volume : 100 uL  
 Date Acquired : 12/27/2023 2:00:31 AM  
 Date Processed : 12/27/2023 2:37:31 AM

Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
6	1,2-DNB	12.996	214005	10700	893.979	mg/L
7	2-NT	23.924	3074	105	14.519	mg/L
Total			217079	10804		



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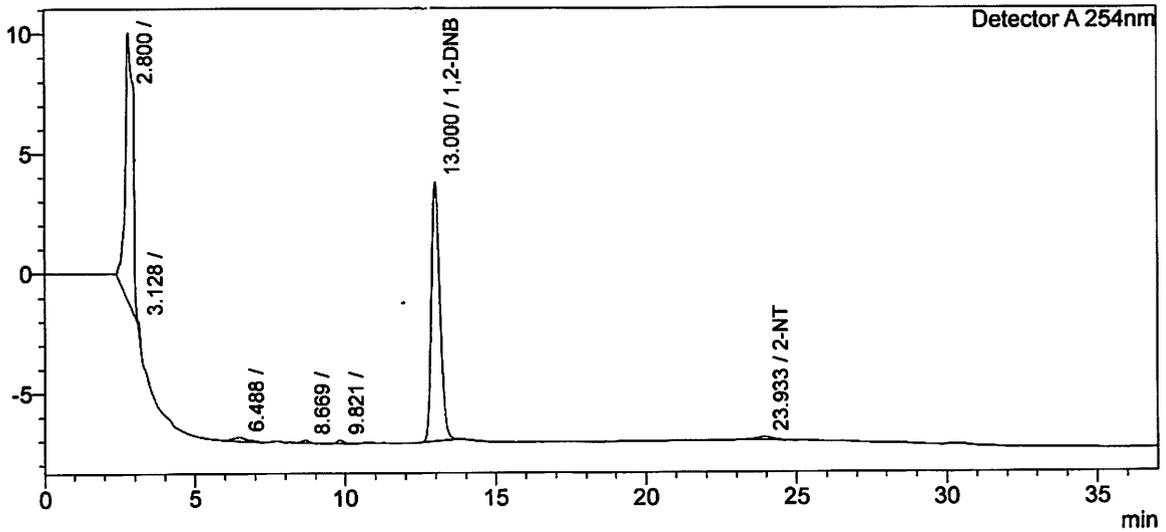
# Analysis Report

## <Sample Information>

Sample Name : MDK0709-04  
 Sample ID :  
 Data Filename : MDK0709-04\_12262023\_019.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-18  
 Injection Volume : 100 uL  
 Date Acquired : 12/27/2023 2:37:58 AM  
 Date Processed : 12/27/2023 3:14:58 AM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
6	1,2-DNB	13.000	213609	10805	892.327	mg/L
7	2-NT	23.933	3995	116	18.870	mg/L
Total			217605	10922		

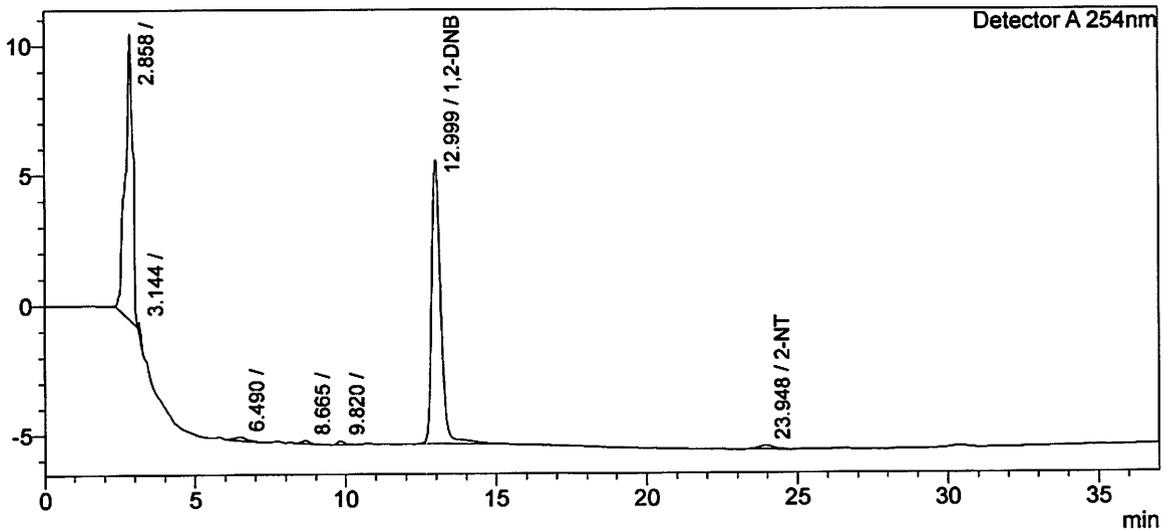
**SHIMADZU**  
**LabSolutions Analysis Report**

**<Sample Information>**

Sample Name : MDK0735-01  
 Sample ID :  
 Data Filename : MDK0735-01\_12262023\_020.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-19  
 Injection Volume : 100 uL  
 Date Acquired : 12/27/2023 3:15:22 AM  
 Date Processed : 12/27/2023 3:52:23 AM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

**<Chromatogram>**

mV



**<Peak Table>**

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
6	1,2-DNB	12.999	226093	10925	944.476	mg/L
7	2-NT	23.948	4243	127	20.038	mg/L
Total			230336	11052		



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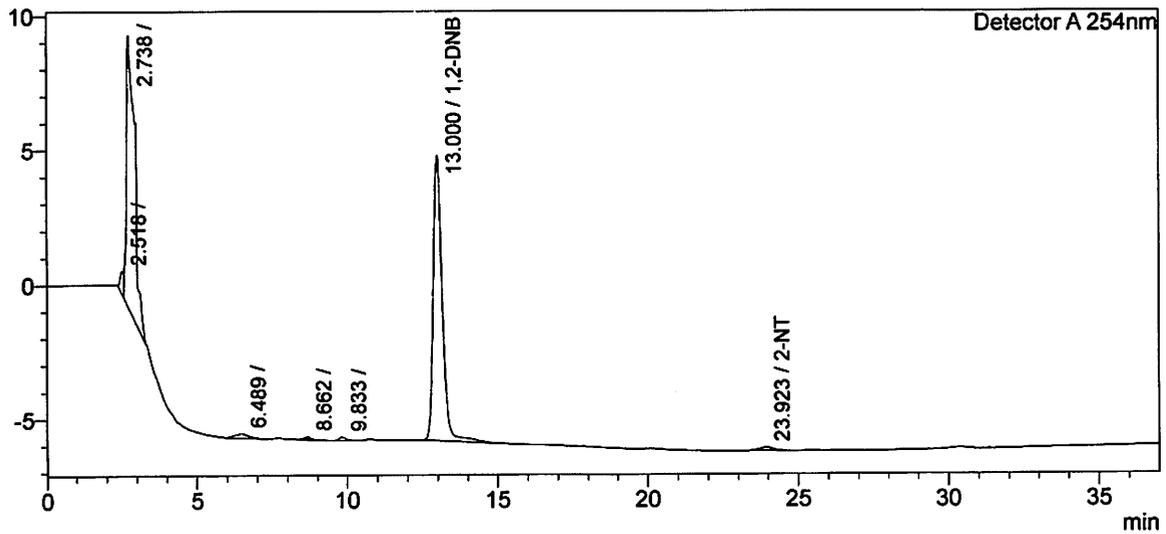
# Analysis Report

## <Sample Information>

Sample Name : MDK0735-02  
 Sample ID :  
 Data Filename : MDK0735-02\_12262023\_021.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-20  
 Injection Volume : 100 uL  
 Date Acquired : 12/27/2023 3:52:48 AM  
 Date Processed : 12/27/2023 4:29:48 AM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
6	1,2-DNB	13.000	220658	10612	921.770	mg/L
7	2-NT	23.923	3525	114	16.647	mg/L
Total			224182	10725		



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LabSolutions

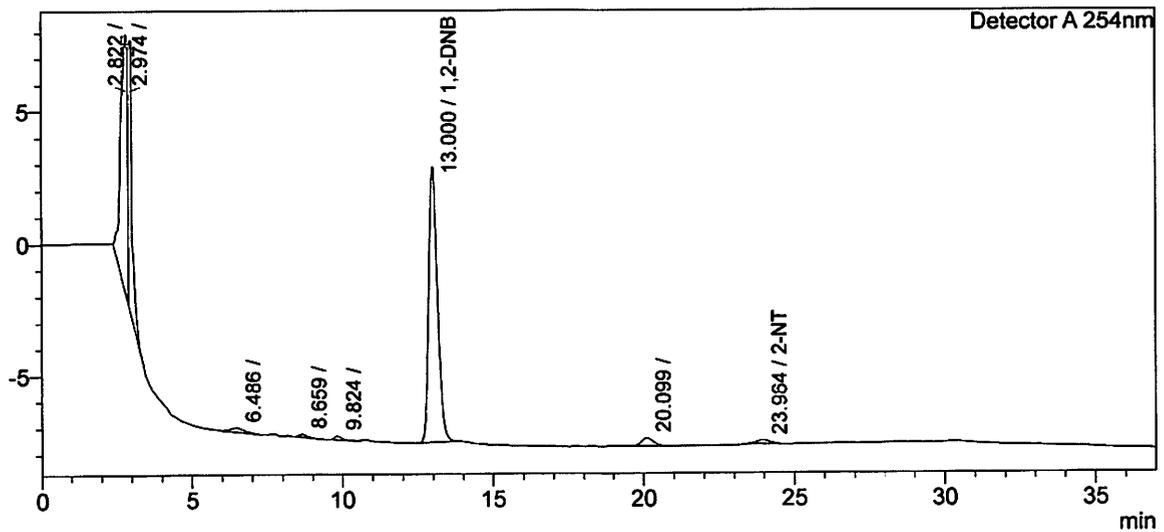
# Analysis Report

## <Sample Information>

Sample Name : MDK0735-03  
 Sample ID :  
 Data Filename : MDK0735-03\_12262023\_022.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-21  
 Injection Volume : 100 uL  
 Date Acquired : 12/27/2023 4:30:12 AM  
 Date Processed : 12/27/2023 5:07:13 AM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
6	1,2-DNB	13.000	210408	10436	878.951	mg/L
8	2-NT	23.964	4550	138	21.490	mg/L
Total			214957	10574		



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LabSolutions

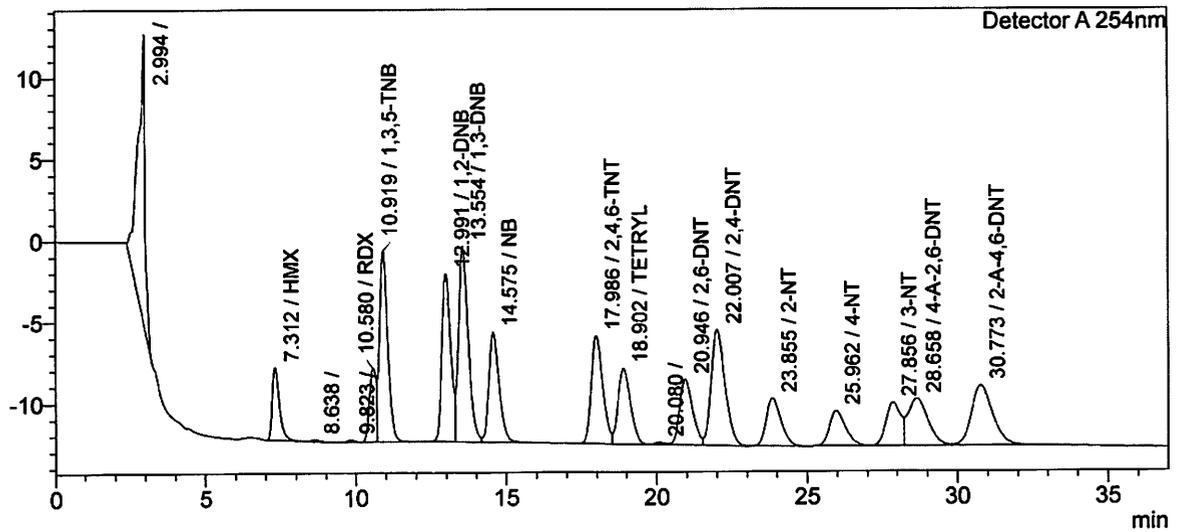
## Analysis Report

## &lt;Sample Information&gt;

Sample Name : BDL0072-MS2  
 Sample ID :  
 Data Filename : BDL0072-MS2\_12262023\_023.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-22  
 Injection Volume : 100 uL  
 Date Acquired : 12/27/2023 5:07:39 AM  
 Date Processed : 12/27/2023 5:44:39 AM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## &lt;Chromatogram&gt;

mV



## &lt;Peak Table&gt;

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
2	HMX	7.312	73766	4464	461.589	mg/L
5	RDX	10.580	69543	4507	492.416	mg/L
6	1,3,5-TNB	10.919	220785	11717	446.314	mg/L
7	1,2-DNB	12.991	208907	10317	872.682	mg/L
8	1,3-DNB	13.554	269074	12034	469.063	mg/L
9	NB	14.575	158980	6754	478.841	mg/L
10	2,4,6-TNT	17.986	175694	6647	457.095	mg/L
11	TETRYL	18.902	137048	4673	423.400	mg/L
13	2,6-DNT	20.946	122174	4047	442.159	mg/L
14	2,4-DNT	22.007	227645	7121	452.271	mg/L
15	2-NT	23.855	99673	2943	470.760	mg/L
16	4-NT	25.962	79162	2142	453.296	mg/L
17	3-NT	27.856	93640	2653	438.529	mg/L
18	4-A-2,6-DNT	28.658	132392	2891	444.474	mg/L
19	2-A-4,6-DNT	30.773	179300	3697	455.733	mg/L
Total			2247782	86606		



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LabSolutions

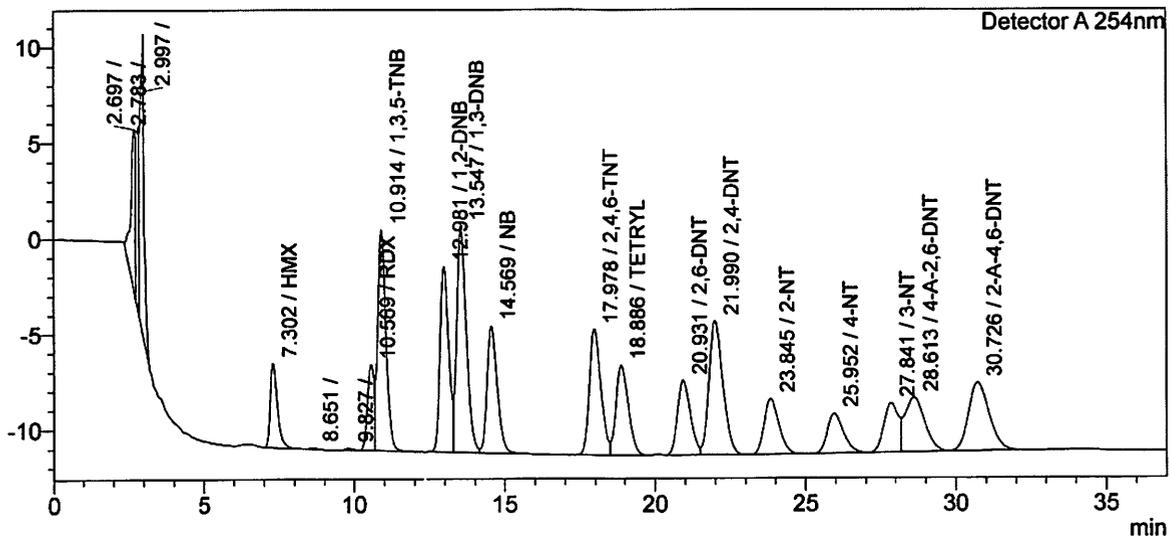
## Analysis Report

## &lt;Sample Information&gt;

Sample Name : BDL0072-MSD2  
 Sample ID :  
 Data Filename : BDL0072-MSD2\_12262023\_024.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-23  
 Injection Volume : 100 uL  
 Date Acquired : 12/27/2023 5:45:05 AM  
 Date Processed : 12/27/2023 6:22:06 AM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## &lt;Chromatogram&gt;

mV



## &lt;Peak Table&gt;

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
4	HMX	7.302	72345	4405	452.697	mg/L
7	RDX	10.569	69212	4465	490.073	mg/L
8	1,3,5-TNB	10.914	217608	11551	439.891	mg/L
9	1,2-DNB	12.981	195932	9697	818.483	mg/L
10	1,3-DNB	13.547	261551	11824	455.949	mg/L
11	NB	14.569	154917	6645	466.606	mg/L
12	2,4,6-TNT	17.978	174071	6579	452.871	mg/L
13	TETRYL	18.886	136990	4692	423.221	mg/L
14	2,6-DNT	20.931	115548	3893	418.178	mg/L
15	2,4-DNT	21.990	223478	7009	443.992	mg/L
16	2-NT	23.845	98087	2889	463.271	mg/L
17	4-NT	25.952	76404	2068	437.503	mg/L
18	3-NT	27.841	88740	2561	415.580	mg/L
19	4-A-2,6-DNT	28.613	128514	2832	431.456	mg/L
20	2-A-4,6-DNT	30.726	169306	3563	430.331	mg/L
Total			2182703	84672		

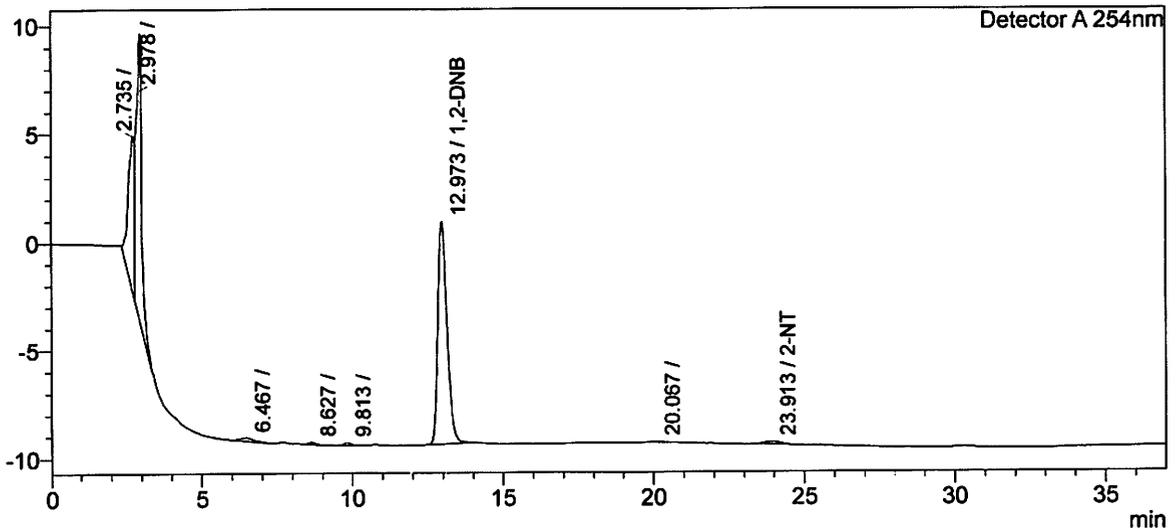
**SHIMADZU**  
**LabSolutions Analysis Report**

**<Sample Information>**

Sample Name : MDK0735-04  
 Sample ID :  
 Data Filename : MDK0735-04\_12262023\_025.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-24  
 Injection Volume : 100 uL  
 Date Acquired : 12/27/2023 6:22:31 AM  
 Date Processed : 12/27/2023 6:59:32 AM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

**<Chromatogram>**

mV



**<Peak Table>**

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
6	1,2-DNB	12.973	217690	10318	909.373	mg/L
8	2-NT	23.913	3841	113	18.144	mg/L
Total			221531	10431		



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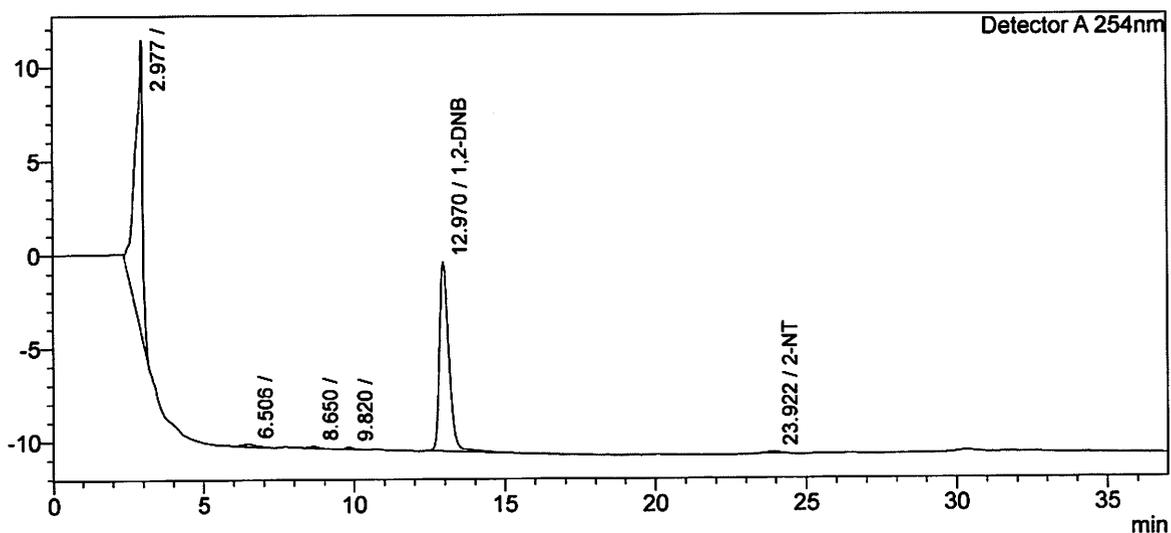
# Analysis Report

## <Sample Information>

Sample Name : MDK0735-05  
 Sample ID :  
 Data Filename : MDK0735-05\_12262023\_026.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-25  
 Injection Volume : 100 uL  
 Date Acquired : 12/27/2023 6:59:57 AM  
 Date Processed : 12/27/2023 7:36:58 AM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
5	1,2-DNB	12.970	218789	10126	913.965	mg/L
6	2-NT	23.922	3186	105	15.046	mg/L
Total			221975	10231		



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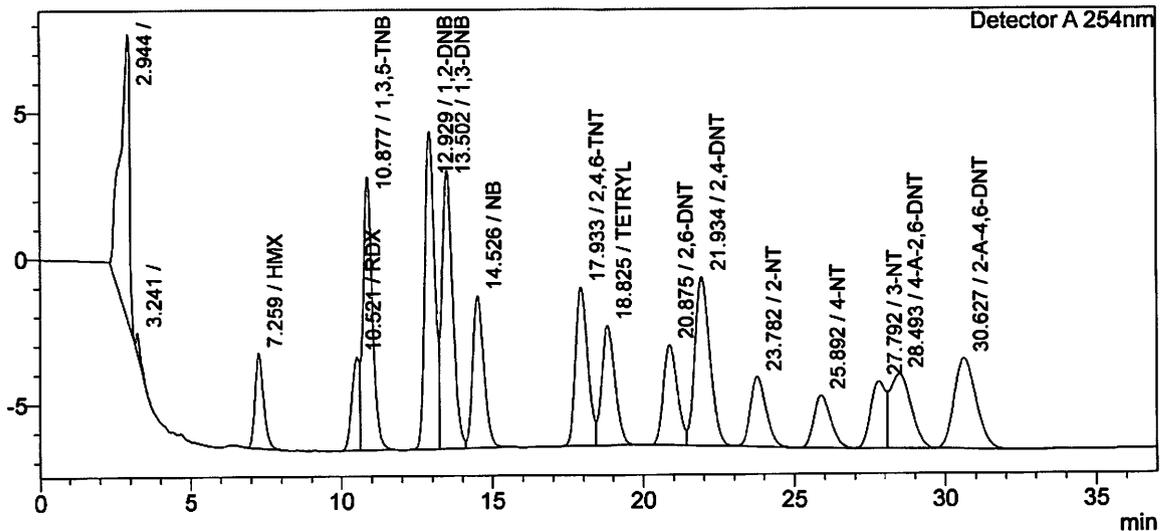
## Analysis Report

## &lt;Sample Information&gt;

Sample Name : CCV 400 ppb  
 Sample ID :  
 Data Filename : CCV 400 ppb\_12262023\_027.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-4  
 Injection Volume : 100 uL  
 Date Acquired : 12/27/2023 7:37:23 AM  
 Date Processed : 12/27/2023 8:14:24 AM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## &lt;Chromatogram&gt;

mV



## &lt;Peak Table&gt;

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
3	HMX	7.259	63870	3261	399.666	mg/L
4	RDX	10.521	56246	3193	398.261	mg/L
5	1,3,5-TNB	10.877	199302	9386	402.885	mg/L
6	1,2-DNB	12.929	248084	10903	1036.340	mg/L
7	1,3-DNB	13.502	236964	9568	413.088	mg/L
8	NB	14.526	133803	5222	403.009	mg/L
9	2,4,6-TNT	17.933	153173	5460	398.502	mg/L
10	TETRYL	18.825	129234	4110	399.261	mg/L
11	2,6-DNT	20.875	110969	3448	401.605	mg/L
12	2,4-DNT	21.934	200530	5815	398.399	mg/L
13	2-NT	23.782	85820	2387	405.334	mg/L
14	4-NT	25.892	70093	1810	401.367	mg/L
15	3-NT	27.792	81526	2297	381.794	mg/L
16	4-A-2,6-DNT	28.493	122258	2551	410.452	mg/L
17	2-A-4,6-DNT	30.627	155850	3104	396.128	mg/L
Total			2047720	72515		

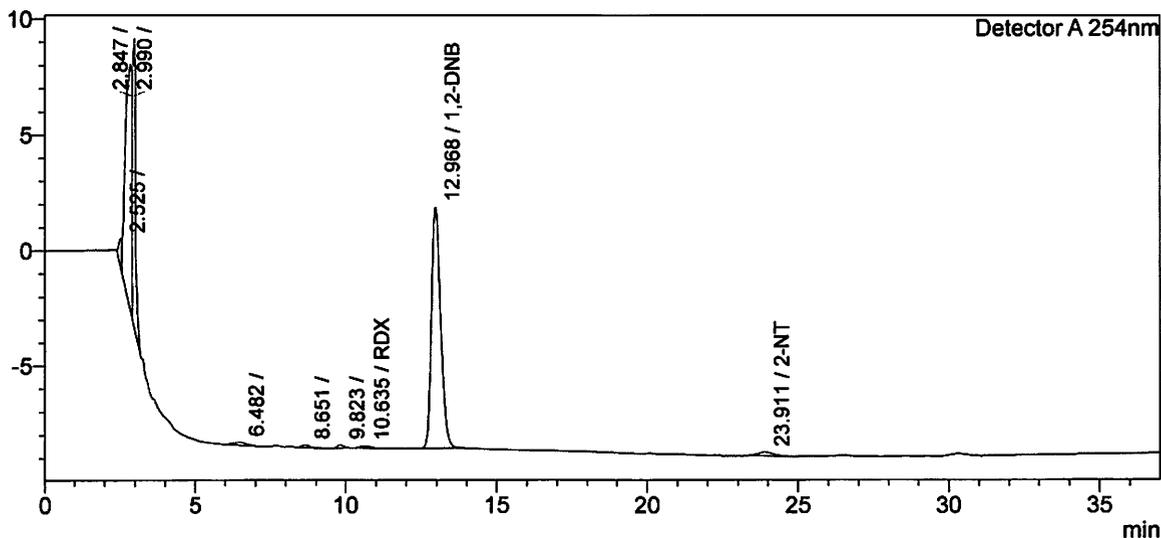
**SHIMADZU**  
**LabSolutions Analysis Report**

**<Sample Information>**

Sample Name : MDK0735-06  
 Sample ID :  
 Data Filename : MDK0735-06\_12262023\_028.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-26  
 Injection Volume : 100 uL  
 Date Acquired : 12/27/2023 8:14:50 AM  
 Date Processed : 12/27/2023 8:51:51 AM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

**<Chromatogram>**

mV



**<Peak Table>**

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
7	RDX	10.635	2035	85	<del>14.409</del>	mg/L *
8	1,2-DNB	12.968	220549	10433	921.315	mg/L
9	2-NT	23.911	4866	144	22.981	mg/L
Total			227449	10662		

\* RDX RT doesn't agree w/ DL. ND for RDX.

MOR 11/13/24



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LabSolutions

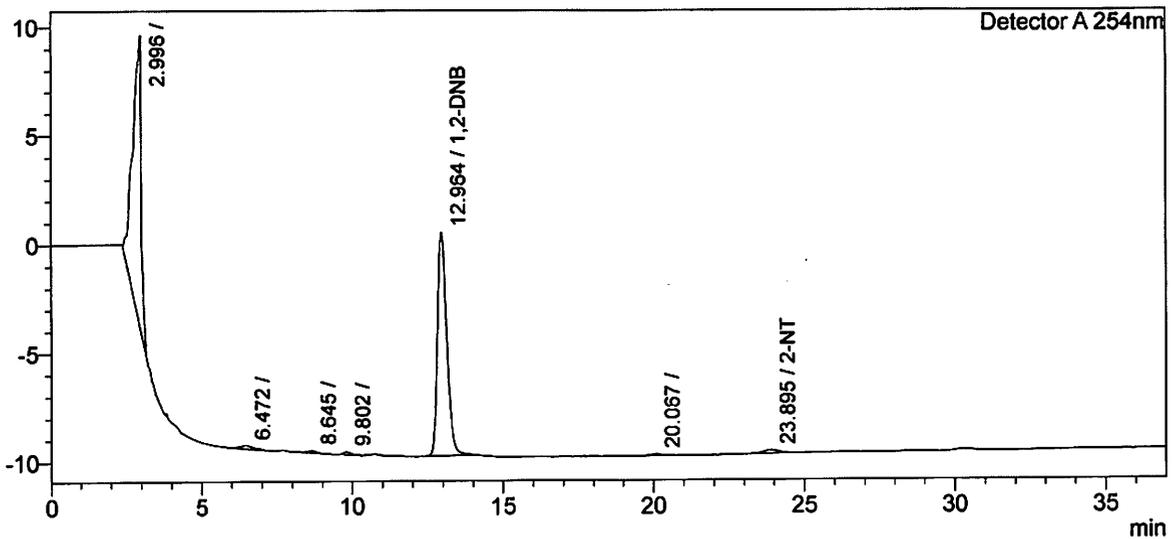
# Analysis Report

## <Sample Information>

Sample Name : MDK0735-07  
 Sample ID :  
 Data Filename : MDK0735-07\_12262023\_029.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-27  
 Injection Volume : 100 uL  
 Date Acquired : 12/27/2023 8:52:16 AM  
 Date Processed : 12/27/2023 9:29:17 AM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
5	1,2-DNB	12.964	220661	10284	921.782	mg/L
7	2-NT	23.895	4527	135	21.380	mg/L
Total			225187	10420		



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LabSolutions

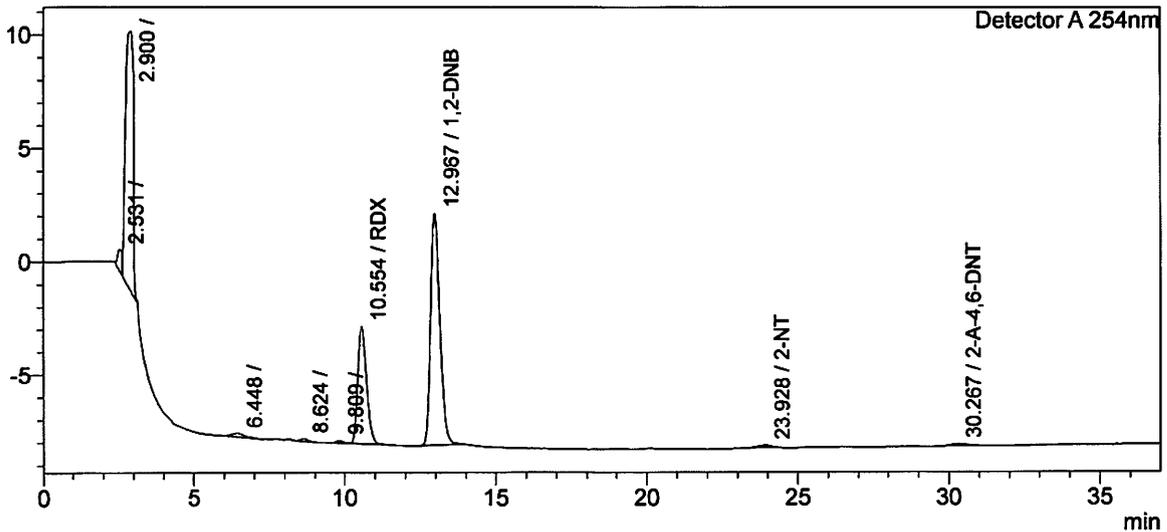
# Analysis Report

## <Sample Information>

Sample Name : MDK0735-08  
 Sample ID :  
 Data Filename : MDK0735-08\_12262023\_030.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-28  
 Injection Volume : 100 uL  
 Date Acquired : 12/27/2023 9:29:41 AM  
 Date Processed : 12/27/2023 10:06:42 AM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
6	RDX	10.554	104128	5191	737.305	mg/L
7	1,2-DNB	12.967	218353	10230	912.143	mg/L
8	2-NT	23.928	3030	101	14.312	mg/L
9	2-A-4,6-DNT	30.267	2484	75	6.314	mg/L
Total			327996	15596		



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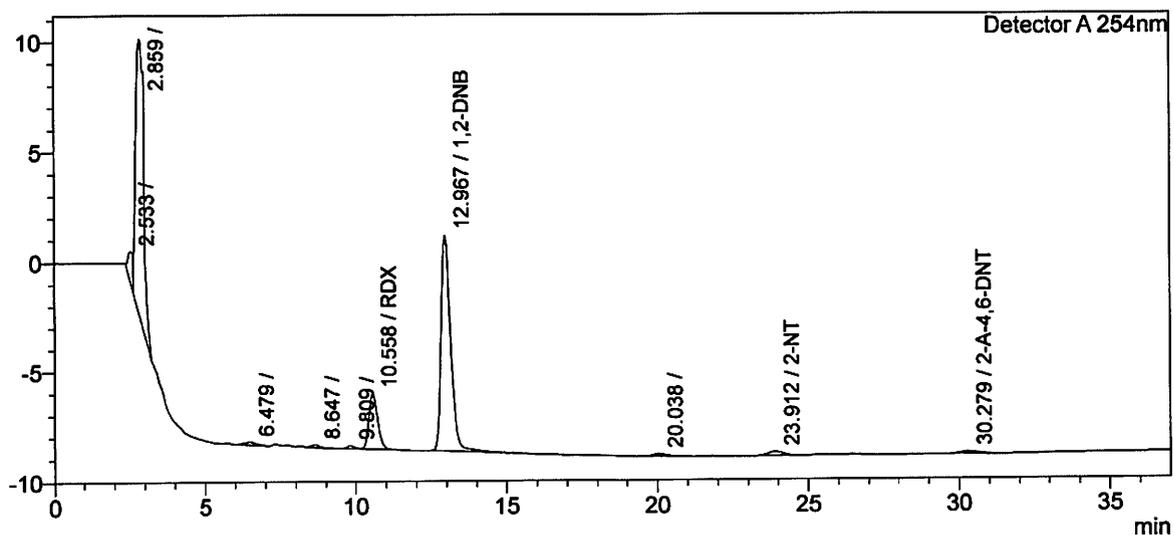
# Analysis Report

## <Sample Information>

Sample Name : MDK0735-09  
 Sample ID :  
 Data Filename : MDK0735-09\_12262023\_031.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-29  
 Injection Volume : 100 uL  
 Date Acquired : 12/27/2023 10:07:07 AM  
 Date Processed : 12/27/2023 10:44:07 AM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
6	RDX	10.558	49844	2491	352.931	mg/L
7	1,2-DNB	12.967	216992	9830	906.457	mg/L
9	2-NT	23.912	5262	161	24.851	mg/L
10	2-A-4,6-DNT	30.279	3535	96	8.986	mg/L
Total			275632	12578		



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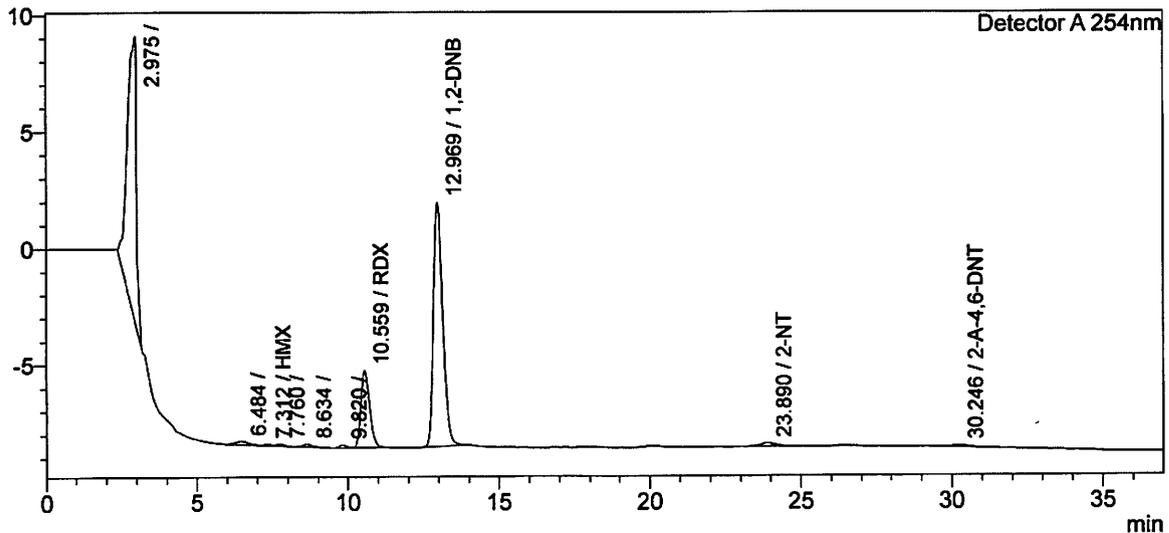
# Analysis Report

## <Sample Information>

Sample Name : MDL0022-01  
 Sample ID :  
 Data Filename : MDL0022-01\_12262023\_032.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-30  
 Injection Volume : 100 uL  
 Date Acquired : 12/27/2023 10:44:32 AM  
 Date Processed : 12/27/2023 11:21:33 AM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
3	HMX	7.312	1065	70	6.664	mg/L
7	RDX	10.559	65632	3292	464.725	mg/L
8	1,2-DNB	12.969	224352	10479	937.203	mg/L
9	2-NT	23.890	4536	133	21.422	mg/L
10	2-A-4,6-DNT	30.246	1700	57	4.320	mg/L
Total			297284	14031		



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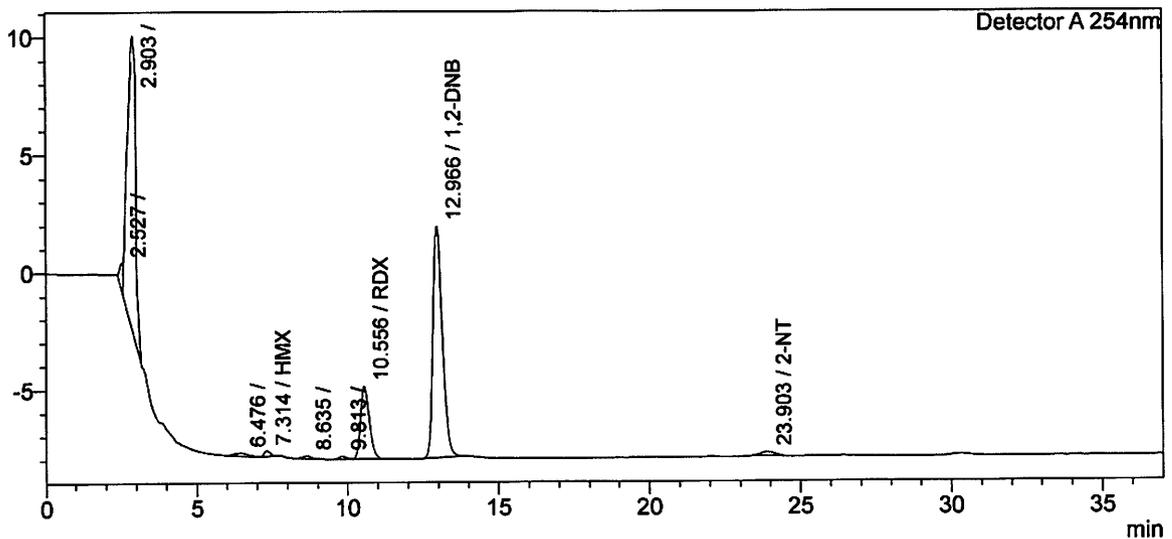
# Analysis Report

## <Sample Information>

Sample Name : MDL0022-02  
 Sample ID :  
 Data Filename : MDL0022-02\_12262023\_033.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-31  
 Injection Volume : 100 uL  
 Date Acquired : 12/27/2023 11:21:58 AM  
 Date Processed : 12/27/2023 11:58:59 AM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
4	HMX	7.314	3232	235	20.225	mg/L
7	RDX	10.556	61915	3074	438.406	mg/L
8	1,2-DNB	12.966	212580	9865	888.027	mg/L
9	2-NT	23.903	5507	163	26.011	mg/L
Total			283235	13337		



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LabSolutions

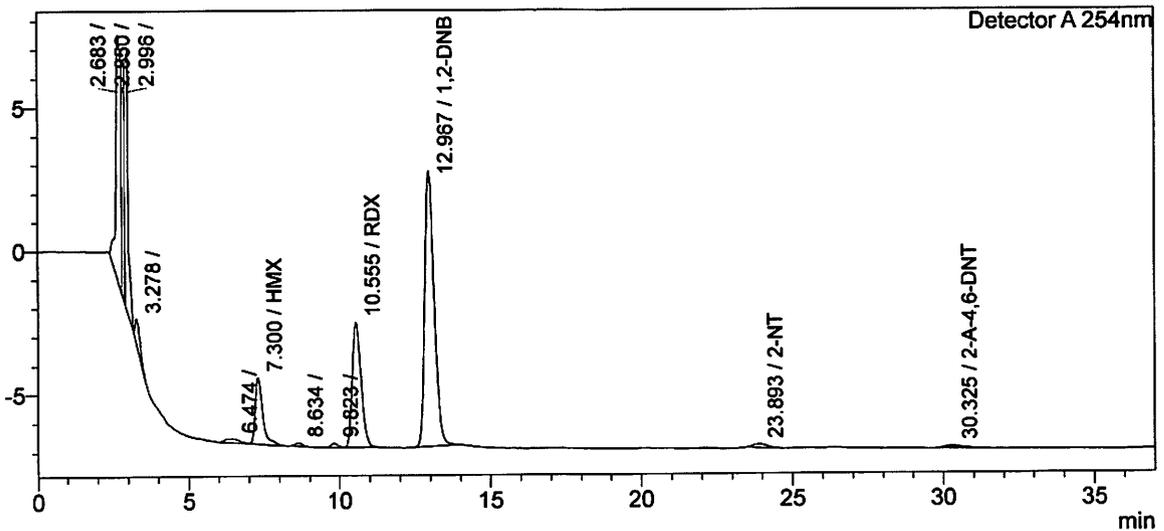
# Analysis Report

## <Sample Information>

Sample Name	: MDL0022-03	Sample Type	: Unknown
Sample ID	:	Acquired by	: System Administrator
Data Filename	: MDL0022-03_12262023_034.lcd	Processed by	: System Administrator
Method Filename	: 8330_50B_28C_final.lcm		
Batch Filename	: 122623EXP.lcb		
Vial #	: 1-32		
Injection Volume	: 100 uL		
Date Acquired	: 12/27/2023 11:59:24 AM		
Date Processed	: 12/27/2023 12:36:25 PM		

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
6	HMX	7.300	39787	2297	248.967	mg/L
9	RDX	10.555	87608	4341	620.326	mg/L
10	1,2-DNB	12.967	207865	9603	868.331	mg/L
11	2-NT	23.893	3794	120	17.921	mg/L
12	2-A-4,6-DNT	30.325	2957	84	7.517	mg/L
Total			342011	16446		

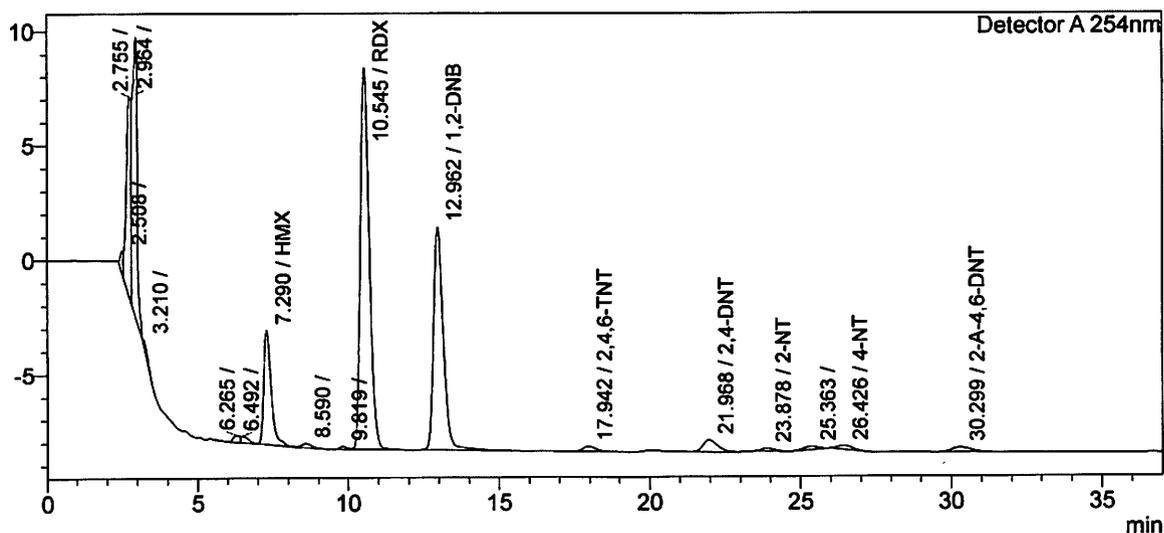
**SHIMADZU**  
**LabSolutions Analysis Report**

**<Sample Information>**

Sample Name : MDL0022-04  
 Sample ID :  
 Data Filename : MDL0022-04\_12262023\_035.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-33  
 Injection Volume : 100 uL  
 Date Acquired : 12/27/2023 12:36:50 PM  
 Date Processed : 12/27/2023 1:13:50 PM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

**<Chromatogram>**

mV



**<Peak Table>**

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
7	HMX	7.290	85019	4996	532.008	mg/L
10	RDX	10.545	340422	16668	2410.442	mg/L
11	1,2-DNB	12.962	219100	9718	915.263	mg/L
12	2,4,6-TNT	17.942	5840	219	15.194	mg/L
13	2,4-DNT	21.968	16918	519	33.612	mg/L
14	2-NT	23.878	3713	115	17.538	mg/L
16	4-NT	26.426	5925	169	33.929	mg/L
17	2-A-4,6-DNT	30.299	8248	199	20.965	mg/L
Total			685187	32602		

*2,4 DNT is 2,4,6 TNT confirmed GCMS.  
 moe 1/9/24*



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LabSolutions

# Analysis Report

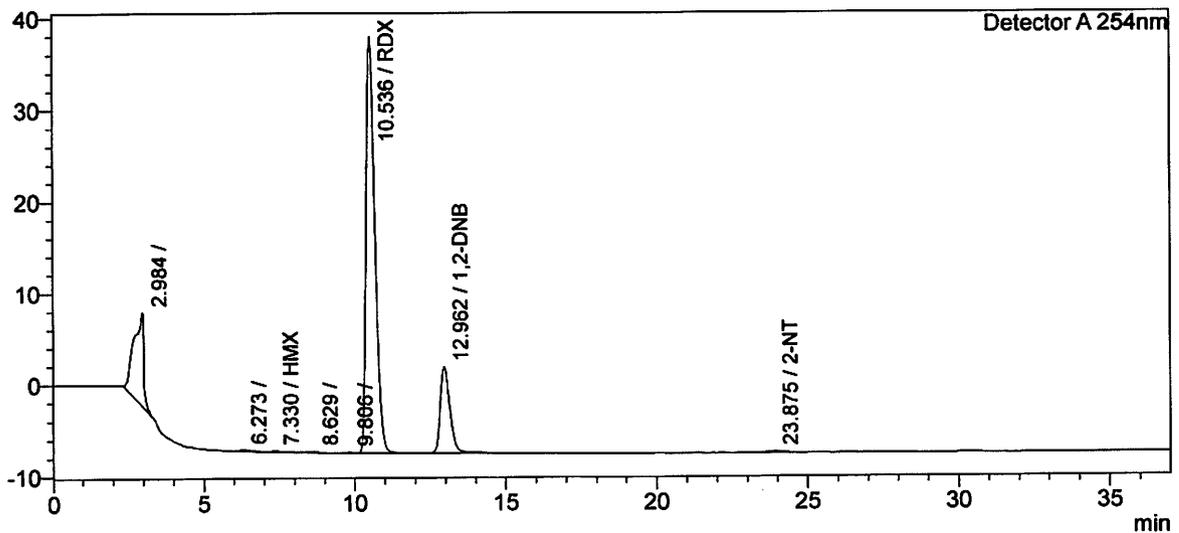
## <Sample Information>

Sample Name : MDL0022-05  
 Sample ID :  
 Data Filename : MDL0022-05\_12262023\_036.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-34  
 Injection Volume : 100 uL  
 Date Acquired : 12/27/2023 1:14:15 PM  
 Date Processed : 12/27/2023 1:51:16 PM

Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
3	HMX	7.330	1571	110	9.832	mg/L
6	RDX	10.536	920758	45497	6519.649	mg/L
7	1,2-DNB	12.962	206915	9334	864.361	mg/L
8	2-NT	23.875	4351	128	20.549	mg/L
Total			1133594	55070		



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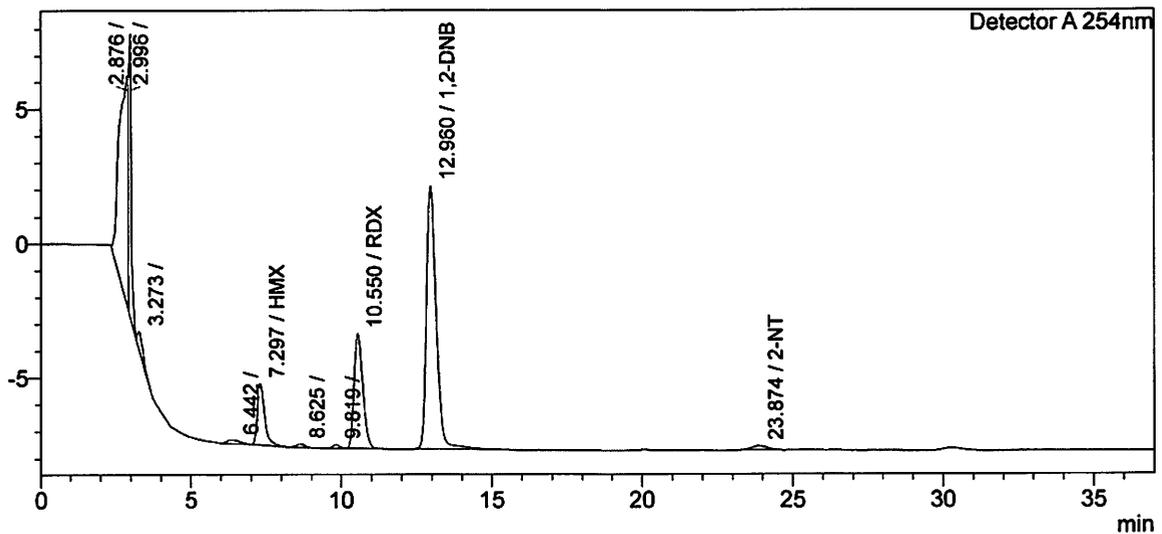
# Analysis Report

## <Sample Information>

Sample Name : MDL0022-06  
 Sample ID :  
 Data Filename : MDL0022-06\_12262023\_037.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-35  
 Injection Volume : 100 uL  
 Date Acquired : 12/27/2023 1:51:41 PM  
 Date Processed : 12/27/2023 2:28:42 PM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
5	HMX	7.297	38861	2284	243.170	mg/L
8	RDX	10.550	86150	4272	610.003	mg/L
9	1,2-DNB	12.960	218978	9785	914.755	mg/L
10	2-NT	23.874	4733	136	22.356	mg/L
Total			348722	16477		



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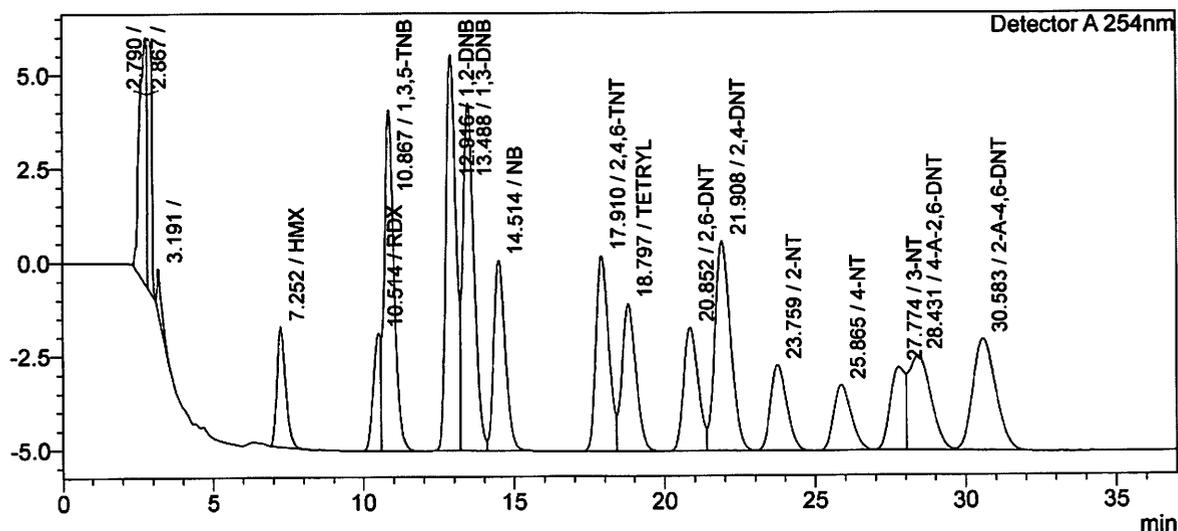
## Analysis Report

## &lt;Sample Information&gt;

Sample Name : CCV 400 ppb  
 Sample ID :  
 Data Filename : CCV 400 ppb\_12262023\_038.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-4  
 Injection Volume : 100 uL  
 Date Acquired : 12/27/2023 2:29:08 PM  
 Date Processed : 12/27/2023 3:06:08 PM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## &lt;Chromatogram&gt;

mV



## &lt;Peak Table&gt;

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
4	HMX	7.252	63347	3203	396.391	mg/L
5	RDX	10.514	53495	3146	378.787	mg/L
6	1,3,5-TNB	10.867	202260	9099	408.866	mg/L
7	1,2-DNB	12.916	245970	10553	1027.510	mg/L
8	1,3-DNB	13.488	237759	9267	414.474	mg/L
9	NB	14.514	134666	5073	405.611	mg/L
10	2,4,6-TNT	17.910	152939	5215	397.895	mg/L
11	TETRYL	18.797	129125	3940	398.923	mg/L
12	2,6-DNT	20.852	110721	3296	400.709	mg/L
13	2,4-DNT	21.908	202490	5597	402.294	mg/L
14	2-NT	23.759	86238	2289	407.309	mg/L
15	4-NT	25.865	70380	1742	403.013	mg/L
16	3-NT	27.774	76871	2216	359.998	mg/L
17	4-A-2,6-DNT	28.431	128127	2516	430.155	mg/L
18	2-A-4,6-DNT	30.583	157285	2982	399.776	mg/L
Total			2051675	70134		



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LabSolutions

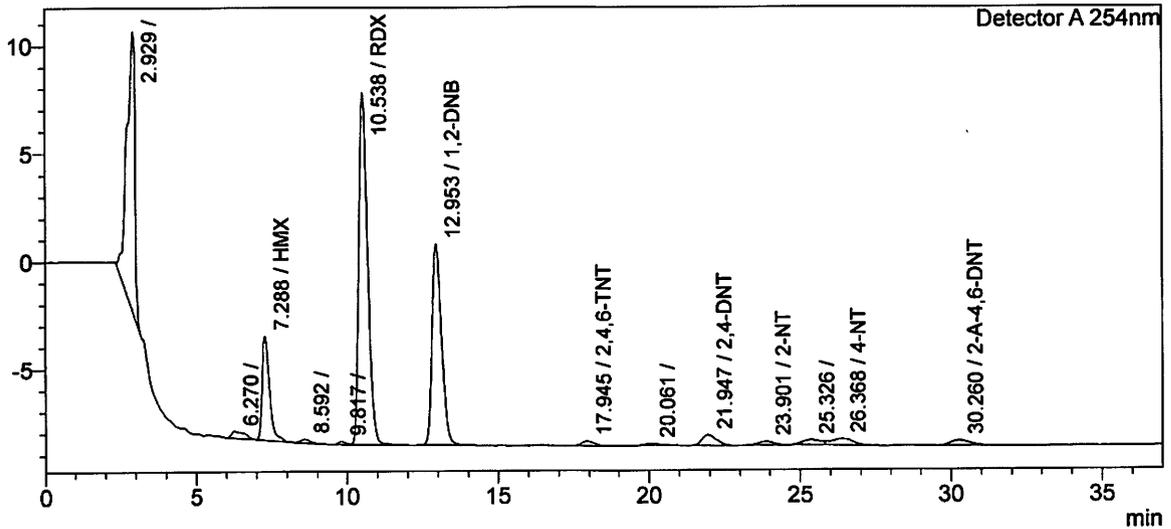
# Analysis Report

## <Sample Information>

Sample Name	: MDL0022-07	Sample Type	: Unknown
Sample ID	:	Acquired by	: System Administrator
Data Filename	: MDL0022-07_12262023_039.lcd	Processed by	: System Administrator
Method Filename	: 8330_50B_28C_final.lcm		
Batch Filename	: 122623EXP.lcb		
Vial #	: 1-36		
Injection Volume	: 100 uL		
Date Acquired	: 12/27/2023 3:06:35 PM		
Date Processed	: 12/27/2023 3:43:35 PM		

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
3	HMX	7.288	81235	4837	508.325	mg/L
6	RDX	10.538	330700	16335	2341.601	mg/L
7	1,2-DNB	12.953	203299	9325	849.258	mg/L
8	2,4,6-TNT	17.945	5573	204	14.498	mg/L
10	2,4-DNT	21.947	16138	491	32.063	mg/L
11	2-NT	23.901	4987	153	23.552	mg/L
13	4-NT	26.368	14438	300	82.674	mg/L
14	2-A-4,6-DNT	30.260	9939	234	25.262	mg/L
Total			666308	31877		

\* 2,4,6-TNT & 2,4-DNT confirmed GCMS.  
4-NT deconfirmed. ND.

MOR 1/19/24



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LabSolutions

# Analysis Report

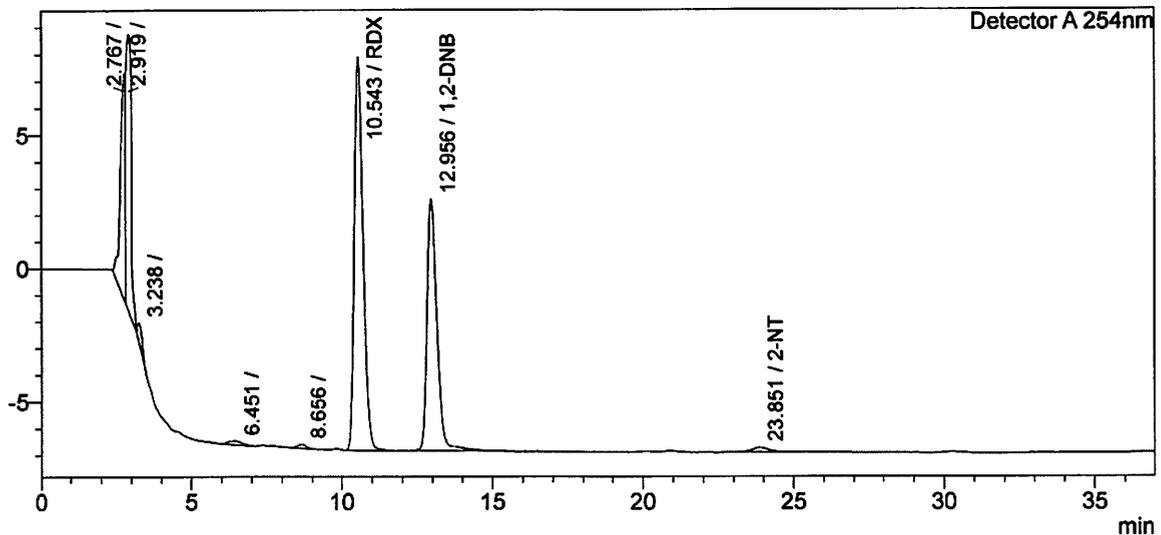
## <Sample Information>

Sample Name : MDL0022-09  
 Sample ID :  
 Data Filename : MDL0022-09\_12262023\_040.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-37  
 Injection Volume : 100 uL  
 Date Acquired : 12/27/2023 3:44:01 PM  
 Date Processed : 12/27/2023 4:21:01 PM

Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
6	RDX	10.543	296744	14719	2101.167	mg/L
7	1,2-DNB	12.956	212631	9418	888.241	mg/L
8	2-NT	23.851	5145	145	24.301	mg/L
Total			514520	24282		



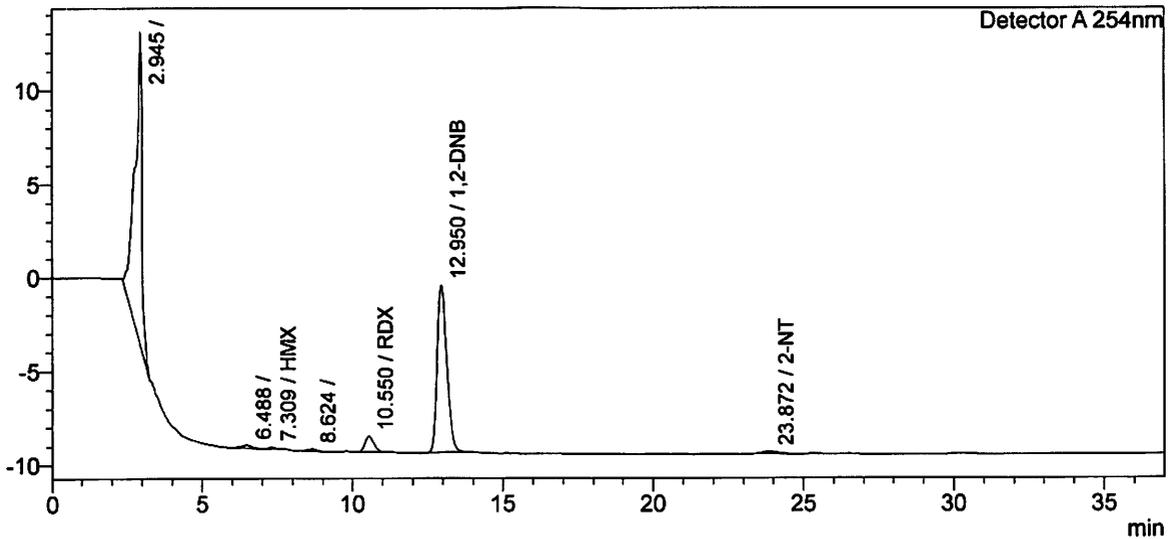
# SHIMADZU LabSolutions Analysis Report

## <Sample Information>

Sample Name : MDL0022-10  
 Sample ID :  
 Data Filename : MDL0022-10\_12262023\_041.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-38  
 Injection Volume : 100 uL  
 Date Acquired : 12/27/2023 4:21:27 PM  
 Date Processed : 12/27/2023 4:58:28 PM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
3	HMX	7.309	1421	111	8.891	mg/L
5	RDX	10.550	17158	838	121.491	mg/L
6	1,2-DNB	12.950	198482	8917	829.135	mg/L
7	2-NT	23.872	3947	119	18.642	mg/L
Total			221008	9984		



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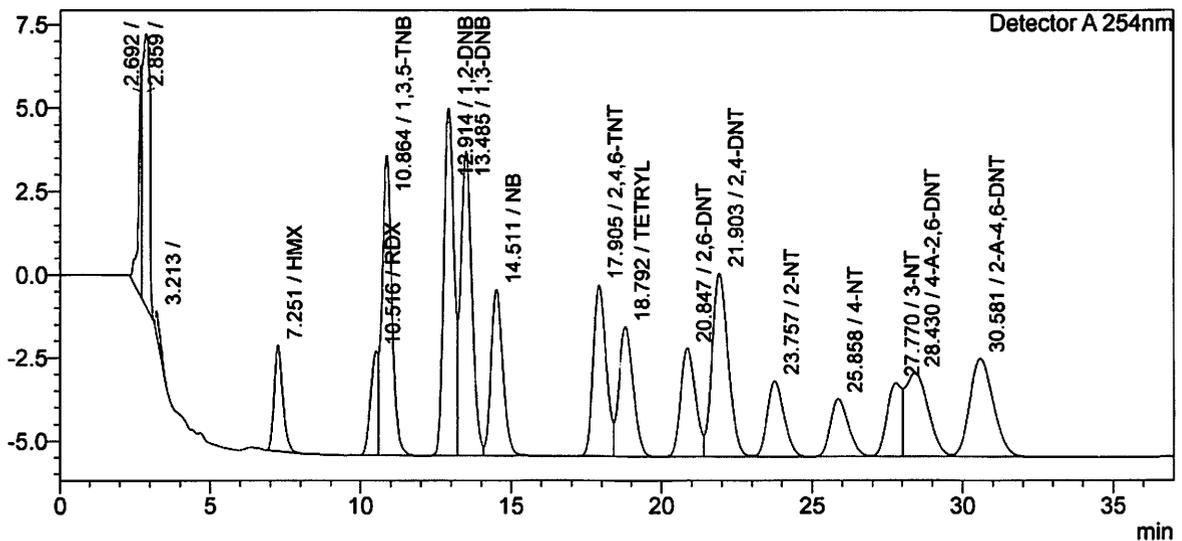
# Analysis Report

## <Sample Information>

Sample Name : CCV 400 ppb  
 Sample ID :  
 Data Filename : CCV 400 ppb\_12262023\_042.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-4  
 Injection Volume : 100 uL  
 Date Acquired : 12/27/2023 4:58:53 PM  
 Date Processed : 12/27/2023 5:35:53 PM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
4	HMX	7.251	63388	3186	396.651	mg/L
5	RDX	10.516	53496	3125	378.793	mg/L
6	1,3,5-TNB	10.864	202853	9004	410.064	mg/L
7	1,2-DNB	12.914	245986	10420	1027.574	mg/L
8	1,3-DNB	13.485	236451	9130	412.193	mg/L
9	NB	14.511	134417	4997	404.859	mg/L
10	2,4,6-TNT	17.905	153305	5150	398.846	mg/L
11	TETRYL	18.792	130201	3895	402.247	mg/L
12	2,6-DNT	20.847	110719	3249	400.704	mg/L
13	2,4-DNT	21.903	203518	5519	404.337	mg/L
14	2-NT	23.757	87517	2267	413.348	mg/L
15	4-NT	25.858	71168	1725	407.526	mg/L
16	3-NT	27.770	76411	2205	357.840	mg/L
17	4-A-2,6-DNT	28.430	131279	2506	440.736	mg/L
18	2-A-4,6-DNT	30.581	158812	2936	403.658	mg/L
Total			2059521	69315		



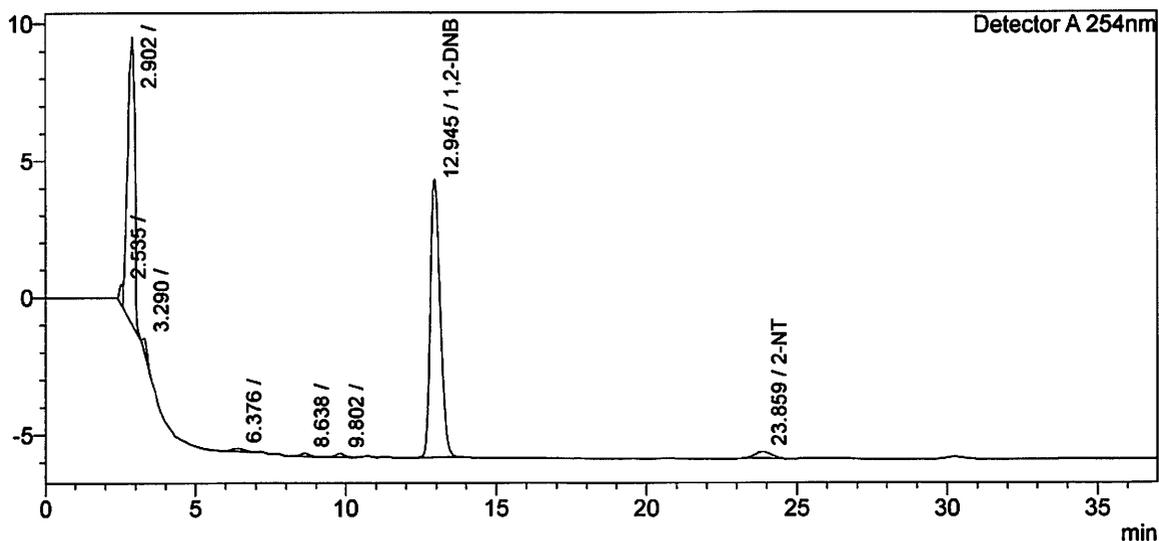
# SHIMADZU LabSolutions Analysis Report

## <Sample Information>

Sample Name : BDL0072-BLK2  
 Sample ID :  
 Data Filename : BDL0072-BLK2\_12262023\_043.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-39  
 Injection Volume : 100 uL  
 Date Acquired : 12/27/2023 5:36:18 PM  
 Date Processed : 12/27/2023 6:13:19 PM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
7	1,2-DNB	12.945	229648	10112	959.327	mg/L
8	2-NT	23.859	8773	230	41.435	mg/L
Total			238421	10342		



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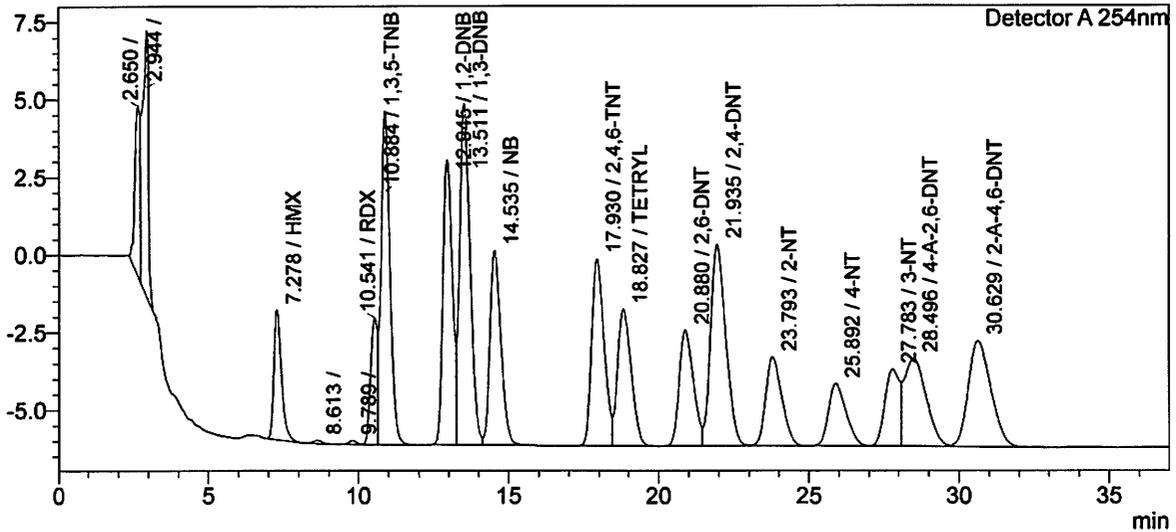
# Analysis Report

## <Sample Information>

Sample Name : BDL0072-BS2  
 Sample ID :  
 Data Filename : BDL0072-BS2\_12262023\_044.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-40  
 Injection Volume : 100 uL  
 Date Acquired : 12/27/2023 6:13:44 PM  
 Date Processed : 12/27/2023 6:50:45 PM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
3	HMX	7.278	73193	4176	458.006	mg/L
6	RDX	10.541	64794	4064	458.788	mg/L
7	1,3,5-TNB	10.884	221102	10721	446.955	mg/L
8	1,2-DNB	12.945	198980	9149	831.212	mg/L
9	1,3-DNB	13.511	266530	10972	464.629	mg/L
10	NB	14.535	157959	6247	475.767	mg/L
11	2,4,6-TNT	17.930	173011	6007	450.115	mg/L
12	TETRYL	18.827	140990	4390	435.580	mg/L
13	2,6-DNT	20.880	121590	3714	440.045	mg/L
14	2,4-DNT	21.935	227347	6470	451.677	mg/L
15	2-NT	23.793	106266	2844	501.900	mg/L
16	4-NT	25.892	80209	1991	459.296	mg/L
17	3-NT	27.783	85733	2476	401.499	mg/L
18	4-A-2,6-DNT	28.496	142097	2821	477.055	mg/L
19	2-A-4,6-DNT	30.629	176495	3395	448.603	mg/L
Total			2236296	79435		



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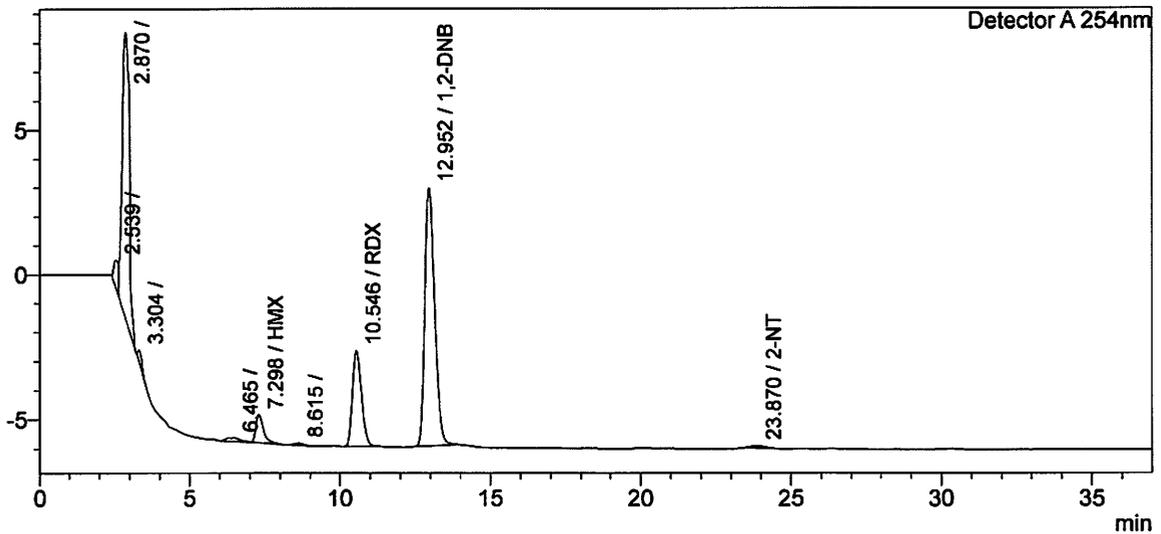
# Analysis Report

## <Sample Information>

Sample Name : MDL0102-01  
 Sample ID :  
 Data Filename : MDL0102-01\_12262023\_045.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-41  
 Injection Volume : 100 uL  
 Date Acquired : 12/27/2023 6:51:10 PM  
 Date Processed : 12/27/2023 7:28:10 PM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
5	HMX	7.298	16817	949	105.231	mg/L
7	RDX	10.546	68339	3289	483.889	mg/L
8	1,2-DNB	12.952	200977	8901	839.554	mg/L
9	2-NT	23.870	2614	80	12.348	mg/L
Total			288746	13220		



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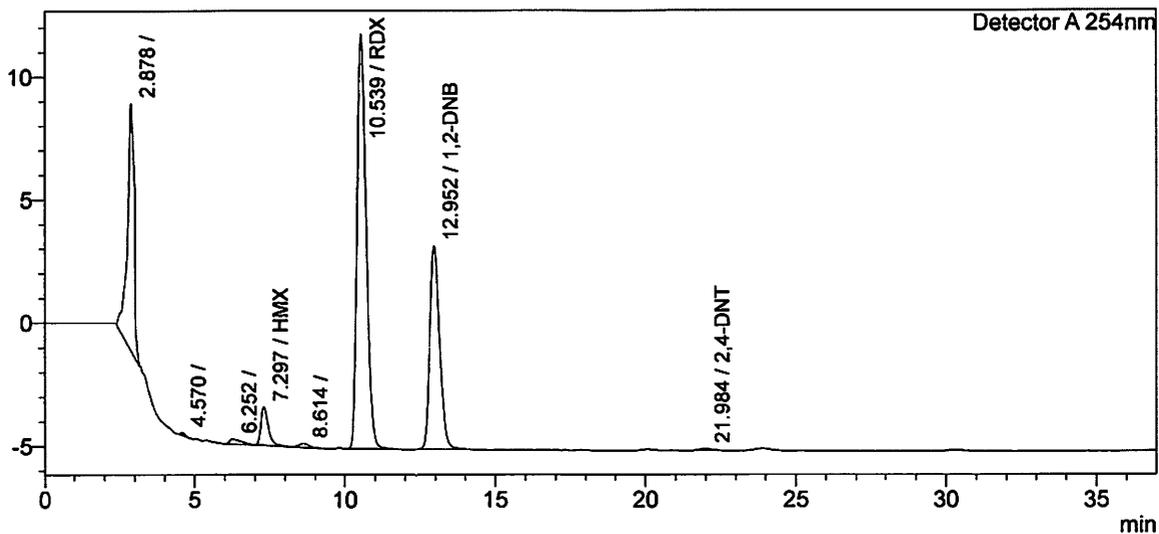
# Analysis Report

## <Sample Information>

Sample Name	: MDL0102-02	Sample Type	: Unknown
Sample ID	:	Acquired by	: System Administrator
Data Filename	: MDL0102-02_12262023_046.lcd	Processed by	: System Administrator
Method Filename	: 8330_50B_28C_final.lcm		
Batch Filename	: 122623EXP.lcb		
Vial #	: 1-42		
Injection Volume	: 100 uL		
Date Acquired	: 12/27/2023 7:28:36 PM		
Date Processed	: 12/27/2023 8:05:36 PM		

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
4	HMX	7.297	26769	1549	167.505	mg/L
6	RDX	10.539	353215	16847	2501.023	mg/L
7	1,2-DNB	12.952	186230	8235	777.953	mg/L
8	2,4-DNT	21.984	1666	60	3.310	mg/L
Total			567879	26691		



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# Analysis Report

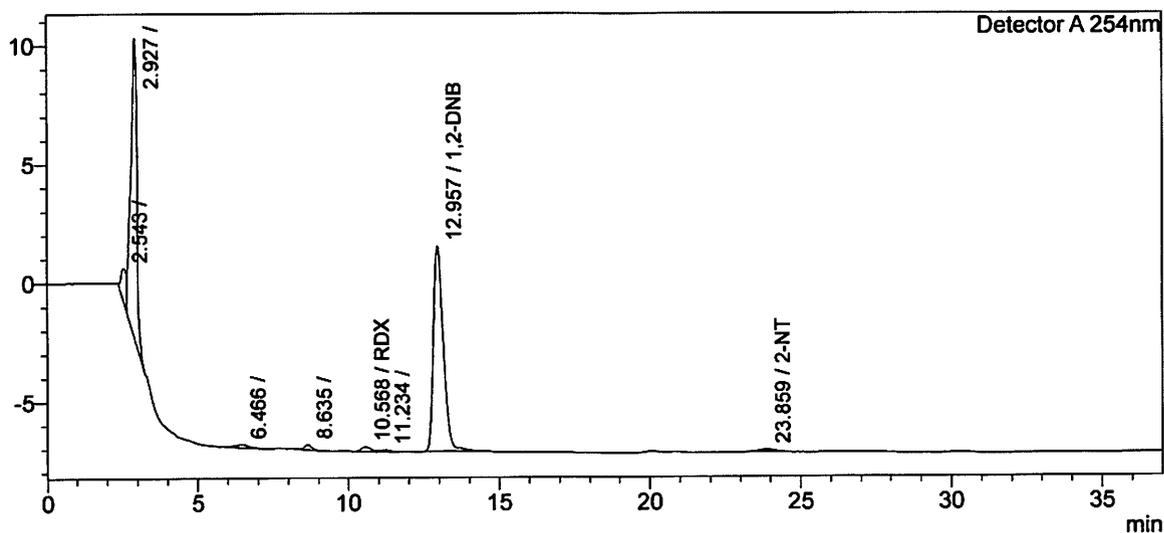
## <Sample Information>

Sample Name : MDL0103-01  
 Sample ID :  
 Data Filename : MDL0103-01\_12262023\_047.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-43  
 Injection Volume : 100 uL  
 Date Acquired : 12/27/2023 8:06:01 PM  
 Date Processed : 12/27/2023 8:43:01 PM

Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
5	RDX	10.568	4132	198	29.259	mg/L
7	1,2-DNB	12.957	197906	8638	826.730	mg/L
8	2-NT	23.859	3306	98	15.616	mg/L
Total			205345	8933		



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# Analysis Report

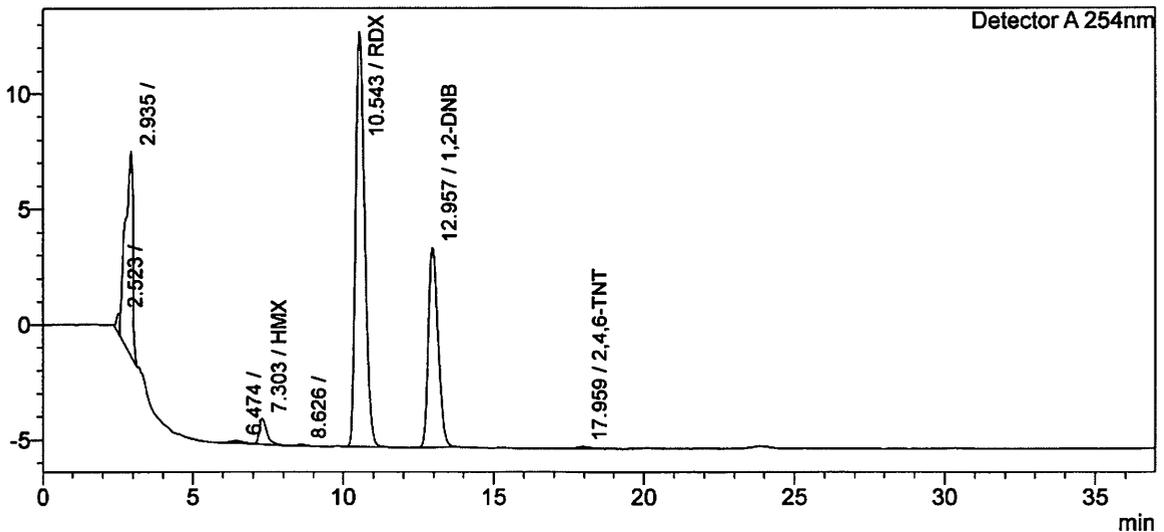
## <Sample Information>

Sample Name : MDL0103-02  
 Sample ID :  
 Data Filename : MDL0103-02\_12262023\_048.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-44  
 Injection Volume : 100 uL  
 Date Acquired : 12/27/2023 8:43:27 PM  
 Date Processed : 12/27/2023 9:20:27 PM

Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## <Chromatogram>

mV



## <Peak Table>

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
4	HMX	7.303	19755	1115	123.617	mg/L
6	RDX	10.543	375640	17995	2659.811	mg/L
7	1,2-DNB	12.957	193702	8646	809.165	mg/L
8	2,4,6-TNT	17.959	2201	85	5.726	mg/L
Total			591298	27841		



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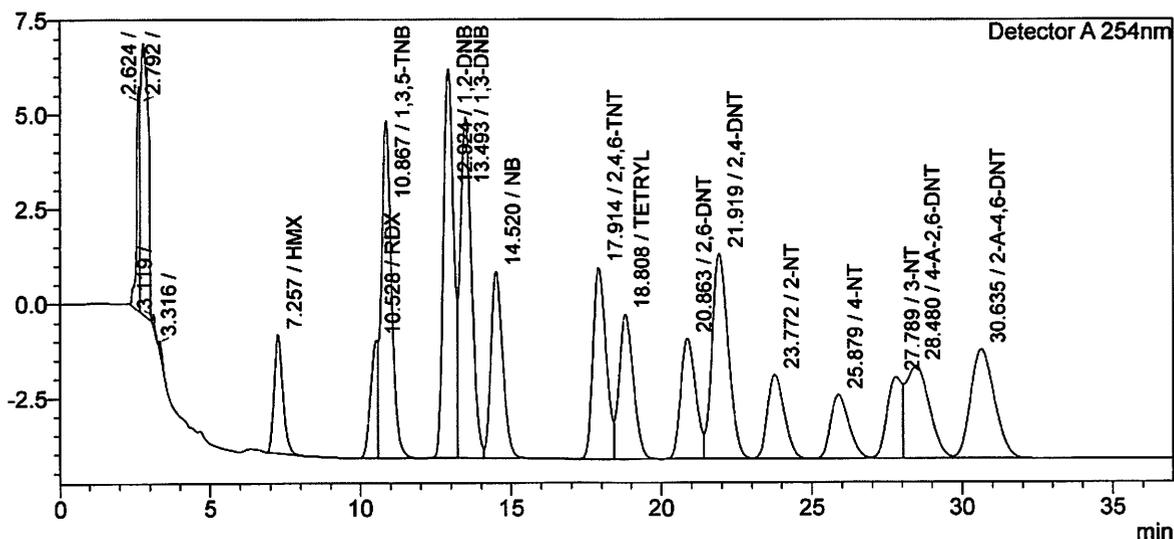
## Analysis Report

## &lt;Sample Information&gt;

Sample Name : CCV 400 ppb  
 Sample ID :  
 Data Filename : CCV 400 ppb\_12262023\_049.lcd  
 Method Filename : 8330\_50B\_28C\_final.lcm  
 Batch Filename : 122623EXP.lcb  
 Vial # : 1-4  
 Injection Volume : 100 uL  
 Date Acquired : 12/27/2023 9:20:53 PM  
 Date Processed : 12/27/2023 9:57:53 PM  
 Sample Type : Unknown  
 Acquired by : System Administrator  
 Processed by : System Administrator

## &lt;Chromatogram&gt;

mV



## &lt;Peak Table&gt;

Detector A 254nm

Peak#	Name	Ret. Time	Area	Height	Conc.	Unit
5	HMX	7.257	63259	3161	395.844	mg/L
6	RDX	10.528	50583	3127	358.162	mg/L
7	1,3,5-TNB	10.867	206452	8942	417.340	mg/L
8	1,2-DNB	12.924	245067	10303	1023.735	mg/L
9	1,3-DNB	13.493	236045	9026	411.487	mg/L
10	NB	14.520	134338	4947	404.622	mg/L
11	2,4,6-TNT	17.914	153280	5073	398.781	mg/L
12	TETRYL	18.808	130255	3842	402.413	mg/L
13	2,6-DNT	20.863	110514	3205	399.962	mg/L
14	2,4-DNT	21.919	203544	5447	404.387	mg/L
15	2-NT	23.772	86888	2233	410.375	mg/L
16	4-NT	25.879	71227	1695	407.860	mg/L
17	3-NT	27.789	76592	2160	358.688	mg/L
18	4-A-2,6-DNT	28.480	131517	2459	441.536	mg/L
19	2-A-4,6-DNT	30.635	159071	2902	404.315	mg/L
Total			2058630	68520		

Data Path : T:\Data1\MSD4\2024\JAN\15MR\  
 Data File : 00301003.D  
 Acq On : 15 Jan 2024 12:16 pm  
 Operator : MAH  
 Sample : MDL0022-04  
 Vial :  
 Vial : 3 Sample Multiplier: 1

Start Time: Jan 15 13:59:08 2024  
 Quant Method : T:\Data1\MSD4\METHODS\2024\MRT-0115.M  
 Quant Title : EPA 8270D / EPA 625.1 - MSD4  
 Quant Update : Mon Jan 15 13:57:39 2024  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
<b>Internal Standards</b>						
1) 1,4-Dichlorobenzene-d4	6.231	152	24876375	20.00	ug/mL	0.00
4) Naphthalene-d8	7.728	136	90486246	20.00	ug/mL	0.00
10) Acenaphthene-d10	9.859	164	55208247	20.00	ug/mL	0.00
3) Phenanthrene-d10	11.683	188	91419779	20.00	ug/mL	0.00
6) Chrysene-d12	14.923	240	52216937	20.00	ug/mL	0.00
<b>System Monitoring Compounds</b>						
2) 2-Fluorophenol	4.859	112	2610933	2.81	ug/mL	0.02
Spiked Amount	50.000		Recovery	=	5.62%	
3) Phenol-d5	6.232	99	211722	0.22	ug/mL	0.11
Spiked Amount	50.000		Recovery	=	0.44%	
5) Nitrobenzene-d5	6.888	82	41007947	22.39	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	89.56%	
7) 2-Fluorobiphenyl	9.045	172	79441980	22.30	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	89.20%	
7) Terphenyl-d14	13.657	244	79449440	19.14	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	76.56%	
<b>Target Compounds</b>						
6) Nitrobenzene	6.888	77	123821	0.06	ug/mL#	27
8) 3-Nitrotoluene	7.828	91	56844	0.03	ug/mL#	23
9) Nitrotoluene	7.976	91	67481	0.06	ug/mL#	11
1) 2,4-Dinitrotoluene	10.109	165	303688	0.46	ug/mL#	88
7) 2,4,6-TNT	11.058	210	41708m	0.35	ug/mL	

(#) - qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2024\JAN\15MR\  
 Data File : 00401004.D  
 Acq On : 15 Jan 2024 12:42 pm  
 Operator : MAH  
 Sample : MDL0022-07  
 Inj Vol : 4 Sample Multiplier: 1

Time: Jan 15 13:59:43 2024  
 Method : T:\Data1\MSD4\METHODS\2024\MRT-0115.M  
 Title : EPA 8270D / EPA 625.1 - MSD4  
 Update : Mon Jan 15 13:57:39 2024  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) 1,4 Dichlorobenzene-d4	6.230	152	24205511	20.00	ug/mL	0.00
4) Naphthalene-d8	7.727	136	87637513	20.00	ug/mL	0.00
10) Acenaphthene-d10	9.860	164	52617467	20.00	ug/mL	0.00
13) Phenanthrene-d10	11.683	188	86182908	20.00	ug/mL	0.00
16) Chrysene-d12	14.922	240	47654303	20.00	ug/mL	0.00
System Monitoring Compounds						
2) 2 Fluorophenol	4.859	112	2351751	2.60	ug/mL	0.02
Spiked Amount	50.000		Recovery	=	5.20%	
3) Phenol-d5	6.231	99	205851	0.22	ug/mL	0.11
Spiked Amount	50.000		Recovery	=	0.44%	
5) Nitrobenzene-d5	6.888	82	37680881	21.24	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	84.96%	
11) 2 Fluorobiphenyl	9.045	172	72173865	21.25	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	85.00%	
7) Terphenyl-d14	13.656	244	72441411	19.12	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	76.48%	
Target Compounds						
						Qvalue
1) Nitrobenzene	6.940	77	1914692	1.00	ug/mL#	27
8) 3-Nitrotoluene	7.829	91	57550	0.03	ug/mL#	23
9) 4-Nitrotoluene	7.976	91	51469	0.05	ug/mL#	11
12) 2,4-Dinitrotoluene	10.109	165	266463	0.43	ug/mL#	88
15) 2,4,6-TNT	11.058	210	35631m	0.32	ug/mL	

Qualifier out of range (m) = manual integration (+) = signals summed

# **Appendix F**

## **Precipitation Data**

## Record of Climatological Observations

**These data are quality controlled and may not be identical to the original observations.**

Current Location: Elev: 411 ft. Lat: 45.6297° N Lon: 122.3698° W  
 Station: **WASHOUGAL 3.7 NNW, WA US US1WACK0027**

Generated on 03/04/2024

Observation Time Temperature: Unknown Observation Time Precipitation: Unknown

Year	Month	Day	Temperature (F)			Precipitation					Evaporation		"Soil Temperature (F)"						
			"24 Hrs. Ending at Observation Time"		At Obs.	24 Hour Amounts Ending at Observation Time				At Obs. Time	24 Hour Wind Movement (mi)	Amount of Evap. (in)	4 in. Depth			8 in. Depth			
			Max.	Min.		Rain, Melted Snow, Etc. (in)	Flag	Snow, Ice Pellets, Hail (in)	Flag				Snow, Ice Pellets, Hail, Ice on Ground (in)	Ground Cover (see *)	Max.	Min.	Ground Cover (see *)	Max.	Min.
2023	11	01				0.00		0.0											
2023	11	02				0.62													
2023	11	03				0.07													
2023	11	04				0.84													
2023	11	05				0.13													
2023	11	06				0.84													
2023	11	07				0.92													
2023	11	08				0.04													
2023	11	09				T													
2023	11	10				0.33													
2023	11	11				0.03													
2023	11	12				0.35													
2023	11	13				0.40													
2023	11	14				0.08													
2023	11	15				0.01													
2023	11	16				T													
2023	11	17				0.00		0.0											
2023	11	18				0.00		0.0											
2023	11	19				0.48													
2023	11	20				0.01													
2023	11	21				0.00		0.0											
2023	11	22				0.36													
2023	11	23				0.02													
2023	11	24				0.00		0.0											
2023	11	25				0.00		0.0											
2023	11	26				0.00		0.0											
2023	11	27				0.00		0.0											
2023	11	28				0.00		0.0											
2023	11	29				0.00		0.0											
2023	11	30				0.00		0.0											
Summary			0	0		5.53		0.0											

Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Bare Ground; 4=Brome grass; 5=Sod; 6=Straw mulch; 7=Grass muck; 8=Bare muck; 0=Unknown

"s" This data value failed one of NCEI's quality control tests. "At Obs." = Temperature at time of observation

"T" values in the Precipitation or Snow category above indicate a "trace" value was recorded.

"A" values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

## Record of Climatological Observations

**These data are quality controlled and may not be identical to the original observations.**

Current Location: Elev: 411 ft. Lat: 45.6297° N Lon: 122.3698° W  
 Station: **WASHOUGAL 3.7 NNW, WA US US1WACK0027**

Generated on 03/04/2024

Observation Time Temperature: Unknown Observation Time Precipitation: Unknown

Year	Month	Day	Temperature (F)			Precipitation					Evaporation		"Soil Temperature (F)"						
			"24 Hrs. Ending at Observation Time"		At Obs.	24 Hour Amounts Ending at Observation Time				At Obs. Time	24 Hour Wind Movement (mi)	Amount of Evap. (in)	4 in. Depth			8 in. Depth			
			Max.	Min.		Rain, Melted Snow, Etc. (in)	Flag	Snow, Ice Pellets, Hail (in)	Flag				Snow, Ice Pellets, Hail, Ice on Ground (in)	Ground Cover (see *)	Max.	Min.	Ground Cover (see *)	Max.	Min.
2023	12	01				0.77													
2023	12	02				1.38													
2023	12	03				1.00													
2023	12	04				0.49													
2023	12	05				1.09													
2023	12	06				1.59													
2023	12	07				0.60													
2023	12	08				0.23													
2023	12	09				0.01													
2023	12	10				2.24													
2023	12	11				0.21													
2023	12	12				0.02													
2023	12	13				0.00		0.0											
2023	12	14				0.00		0.0											
2023	12	15				0.03													
2023	12	16				0.00		0.0											
2023	12	17				0.00		0.0											
2023	12	18				0.00		0.0											
2023	12	19				0.40													
2023	12	20				0.08													
2023	12	21				0.00		0.0											
2023	12	22				0.02													
2023	12	23				0.43													
2023	12	24				T													
2023	12	25																	
2023	12	26				0.57													
2023	12	27				0.00		0.0											
2023	12	28				0.10													
2023	12	29				0.01													
2023	12	30				0.13													
2023	12	31				0.19													
Summary			0	0		11.59													

Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Bare Ground; 4=Brome grass; 5=Sod; 6=Straw mulch; 7=Grass muck; 8=Bare muck; 0=Unknown

"s" This data value failed one of NCEI's quality control tests. "At Obs." = Temperature at time of observation

"T" values in the Precipitation or Snow category above indicate a "trace" value was recorded.

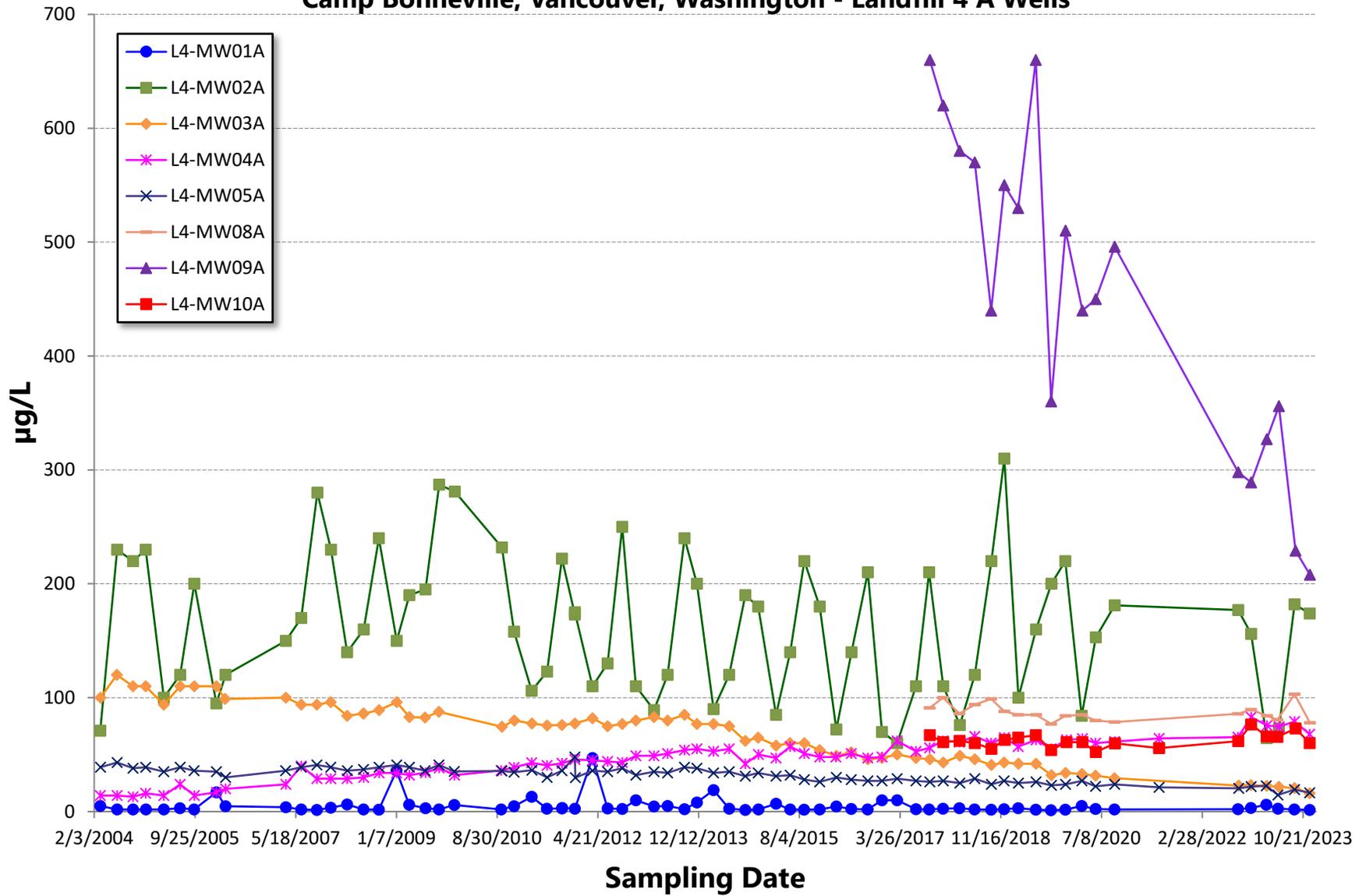
"A" values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

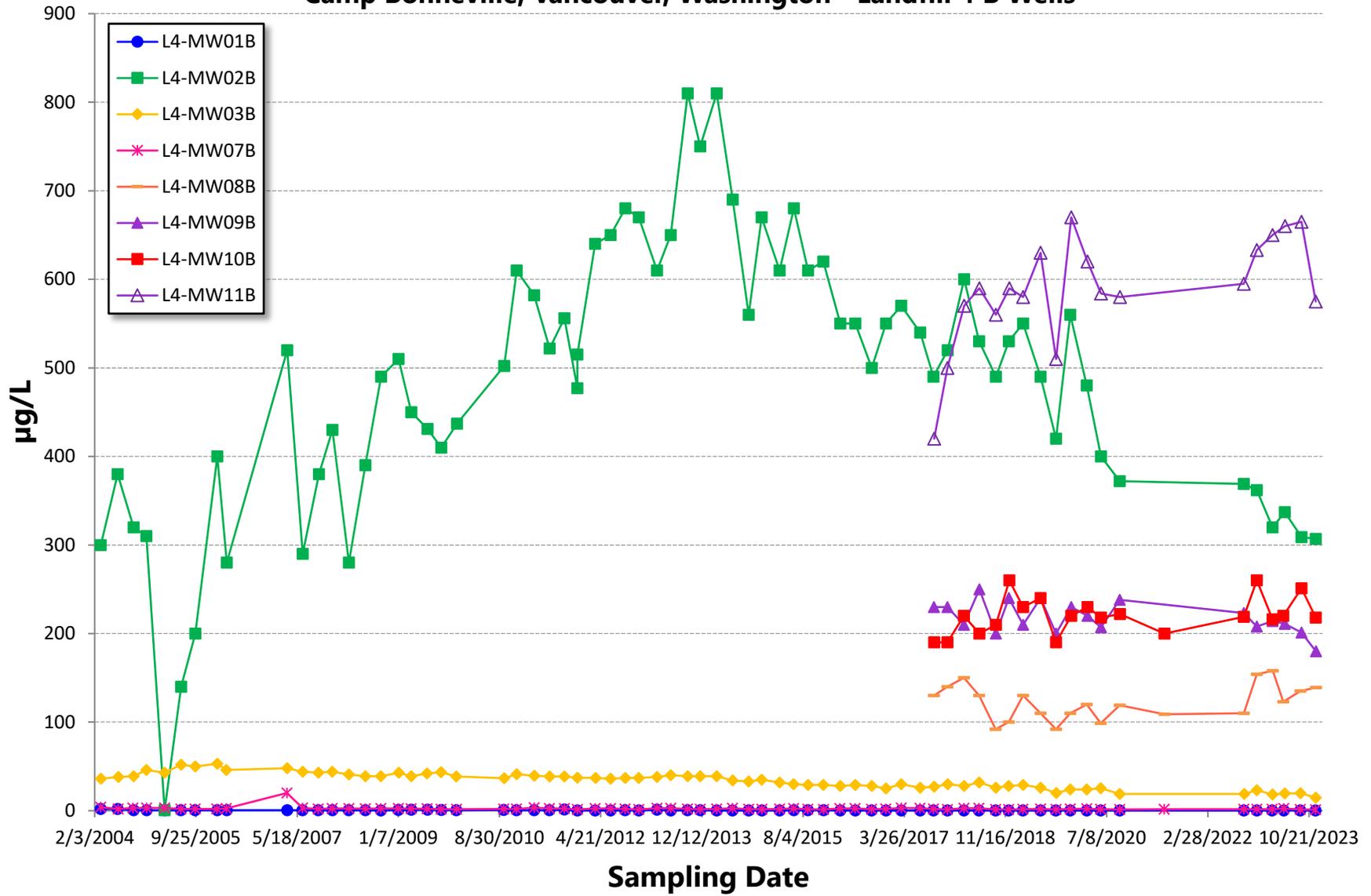
# Appendix G

## Trend Graphs

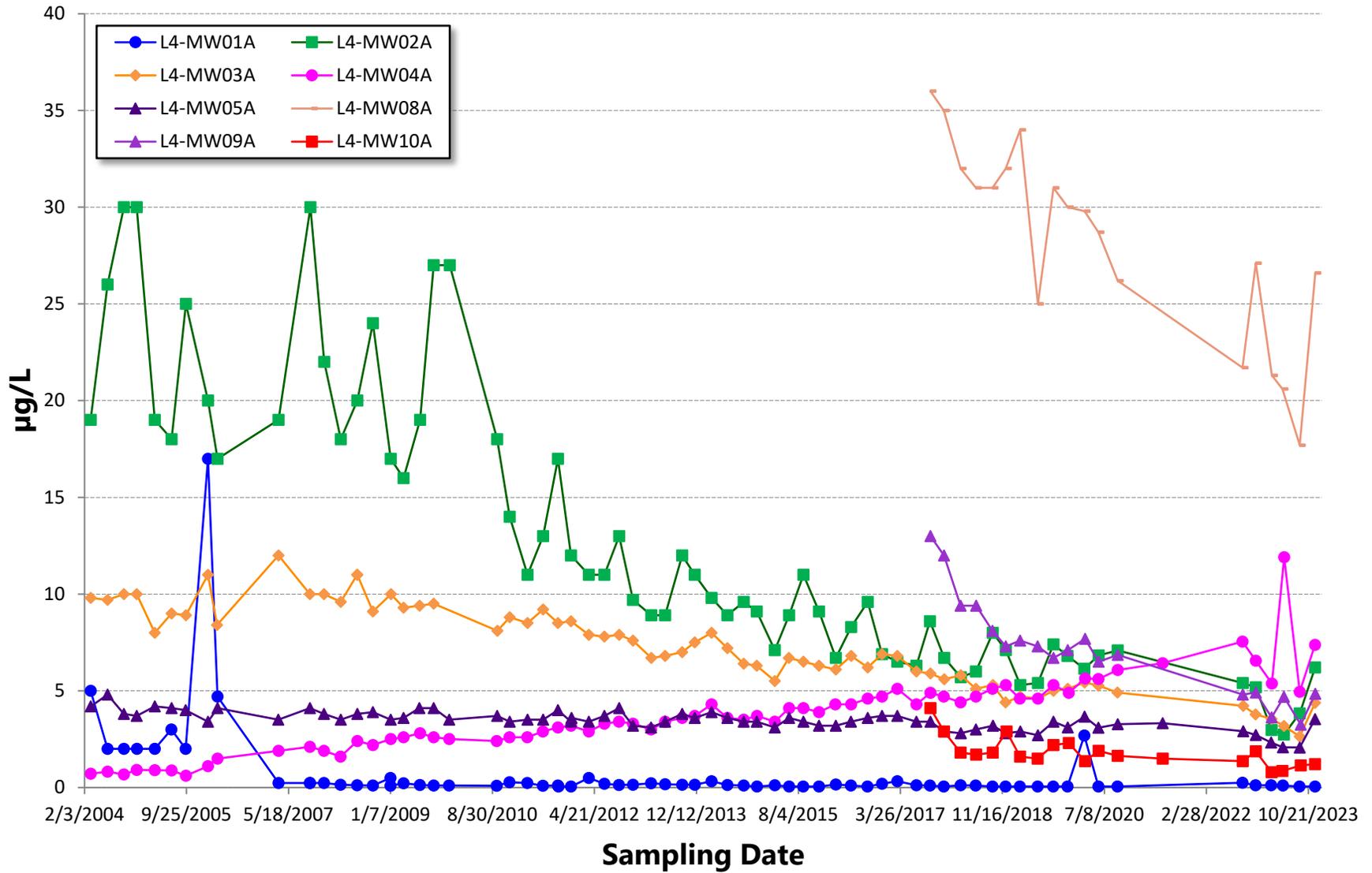
# Historical Perchlorate Concentrations in Groundwater Camp Bonneville, Vancouver, Washington - Landfill 4 A Wells



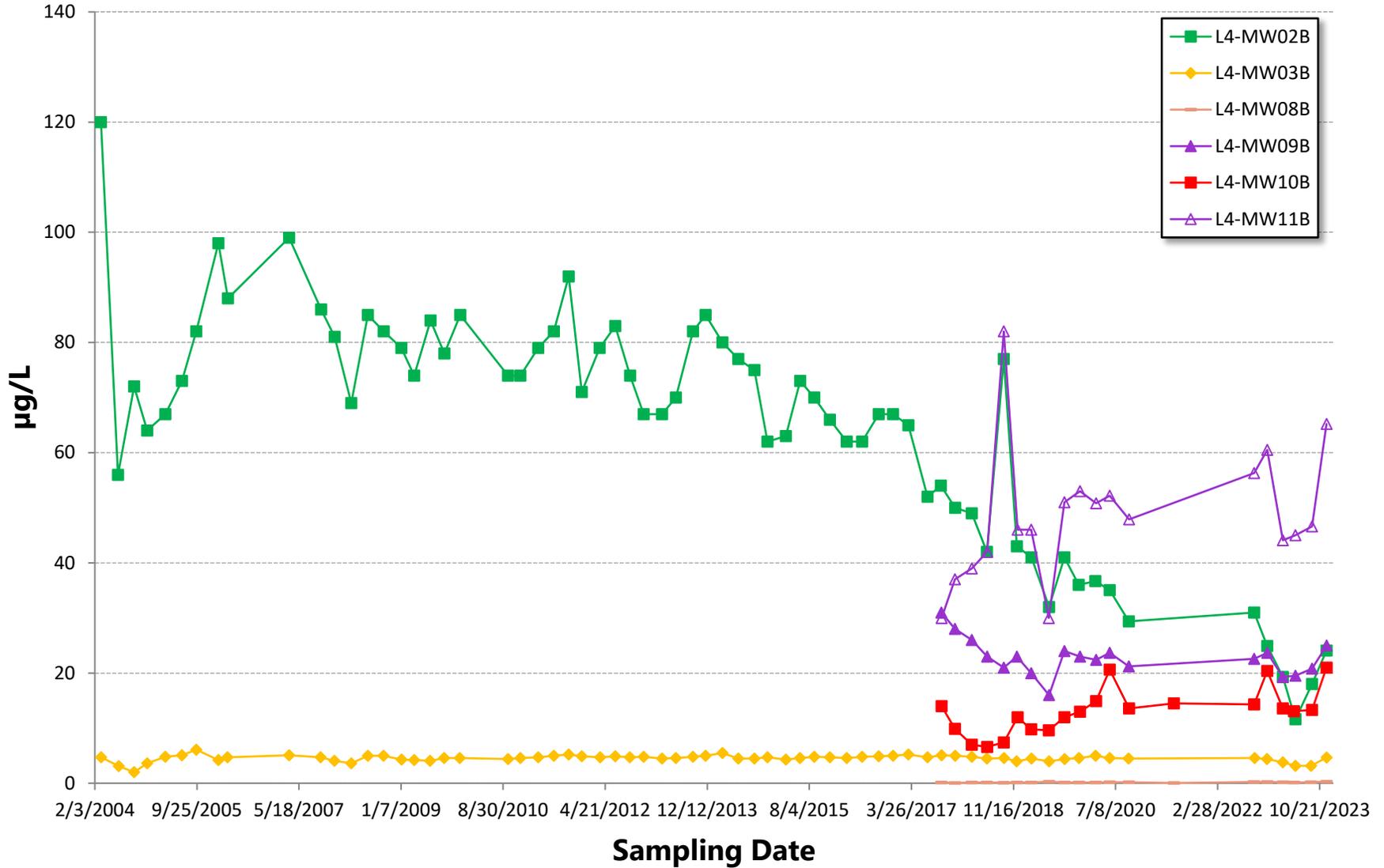
# Historical Perchlorate Concentrations in Groundwater Camp Bonneville, Vancouver, Washington - Landfill 4 B Wells



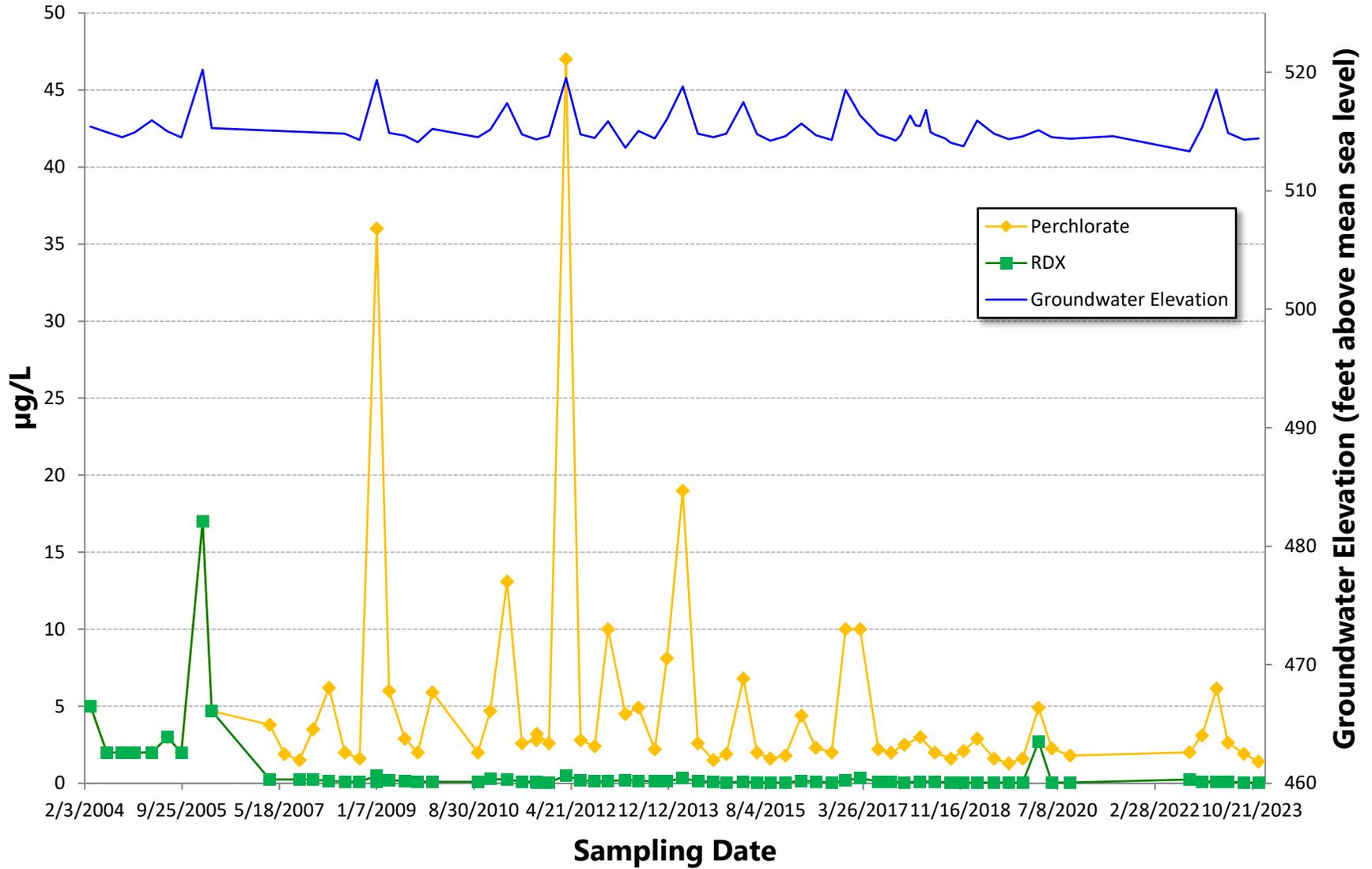
## Historical RDX Concentrations in Groundwater Camp Bonneville, Vancouver, Washington - Landfill 4 A Wells



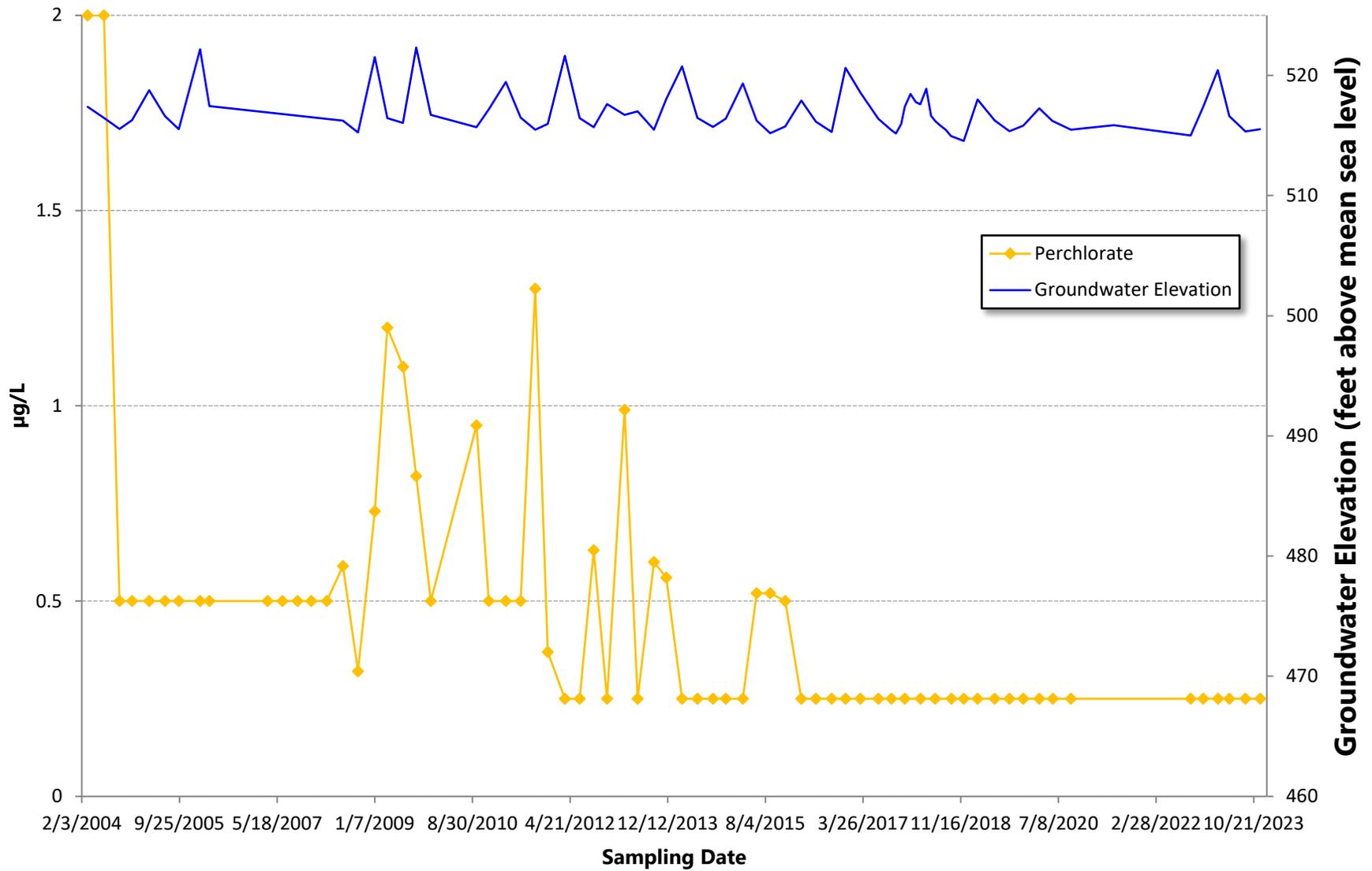
# Historical RDX Concentrations in Groundwater Camp Bonneville, Vancouver, Washington - Landfill 4 B Wells



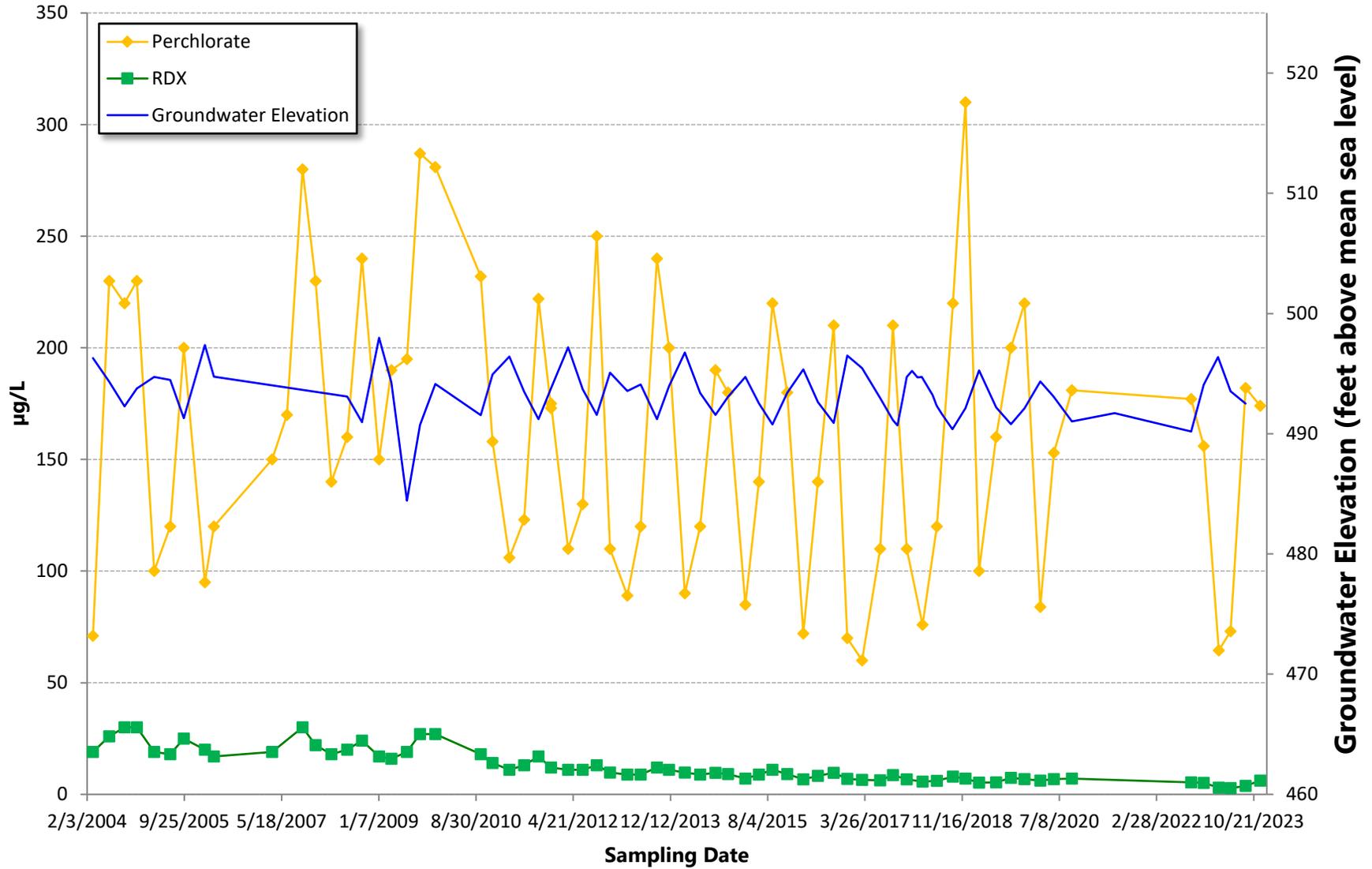
# Historical Groundwater Concentrations Camp Bonneville, Vancouver, Washington - Well L4-MW01A



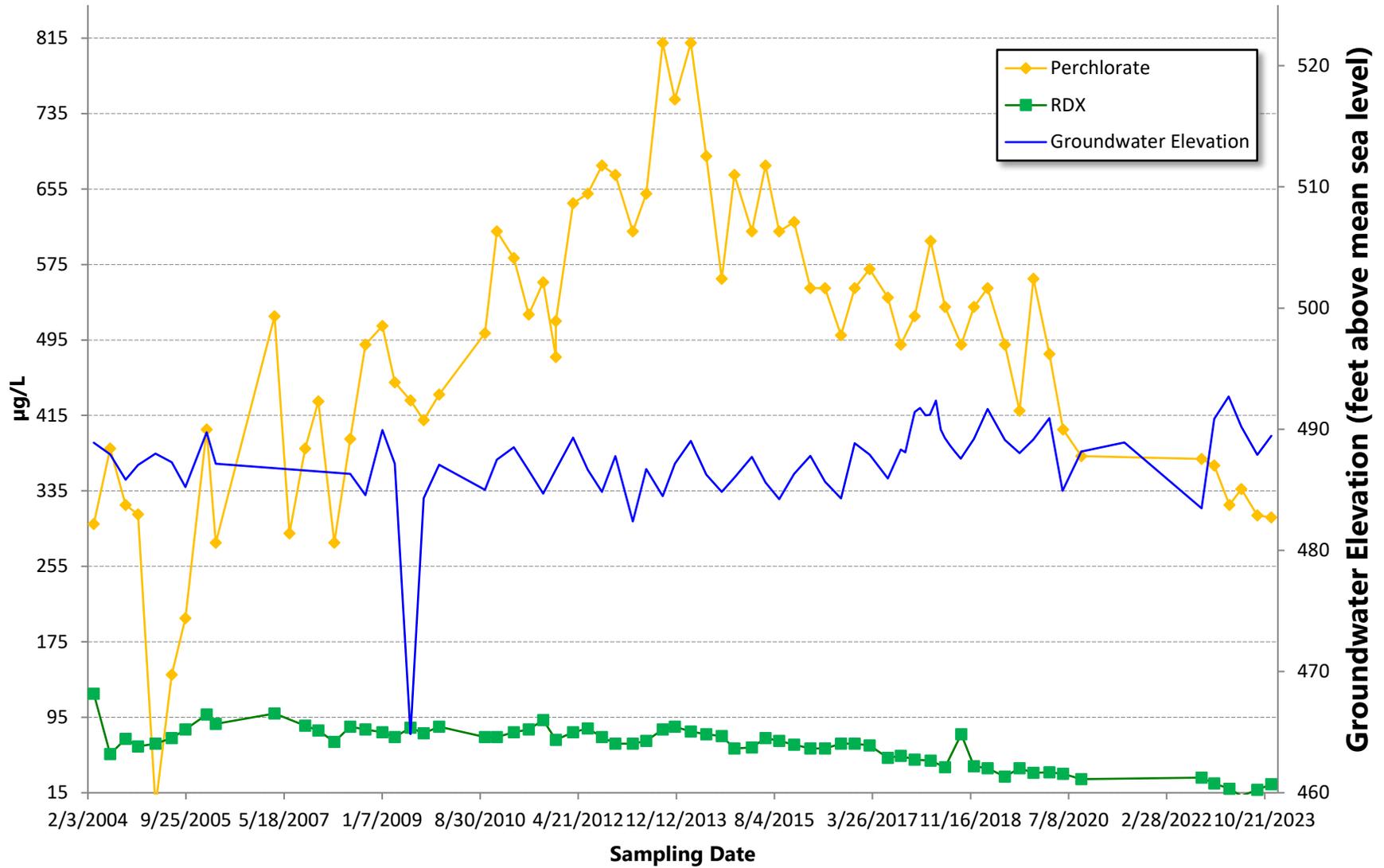
# Historical Groundwater Concentrations Camp Bonneville, Vancouver, Washington - Well L4-MW01B



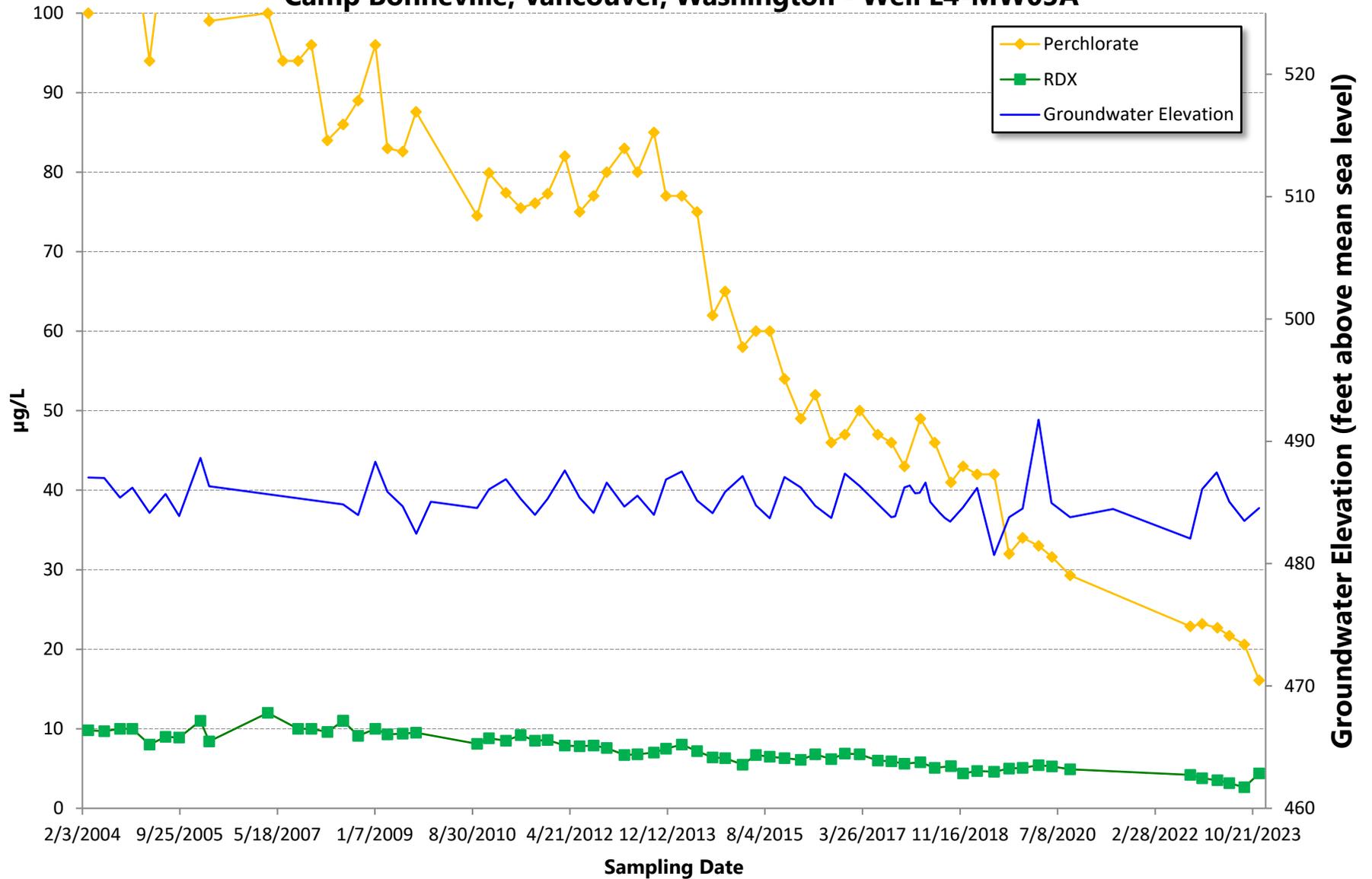
## Historical Groundwater Concentrations Camp Bonneville, Vancouver, Washington - Well L4-MW02A



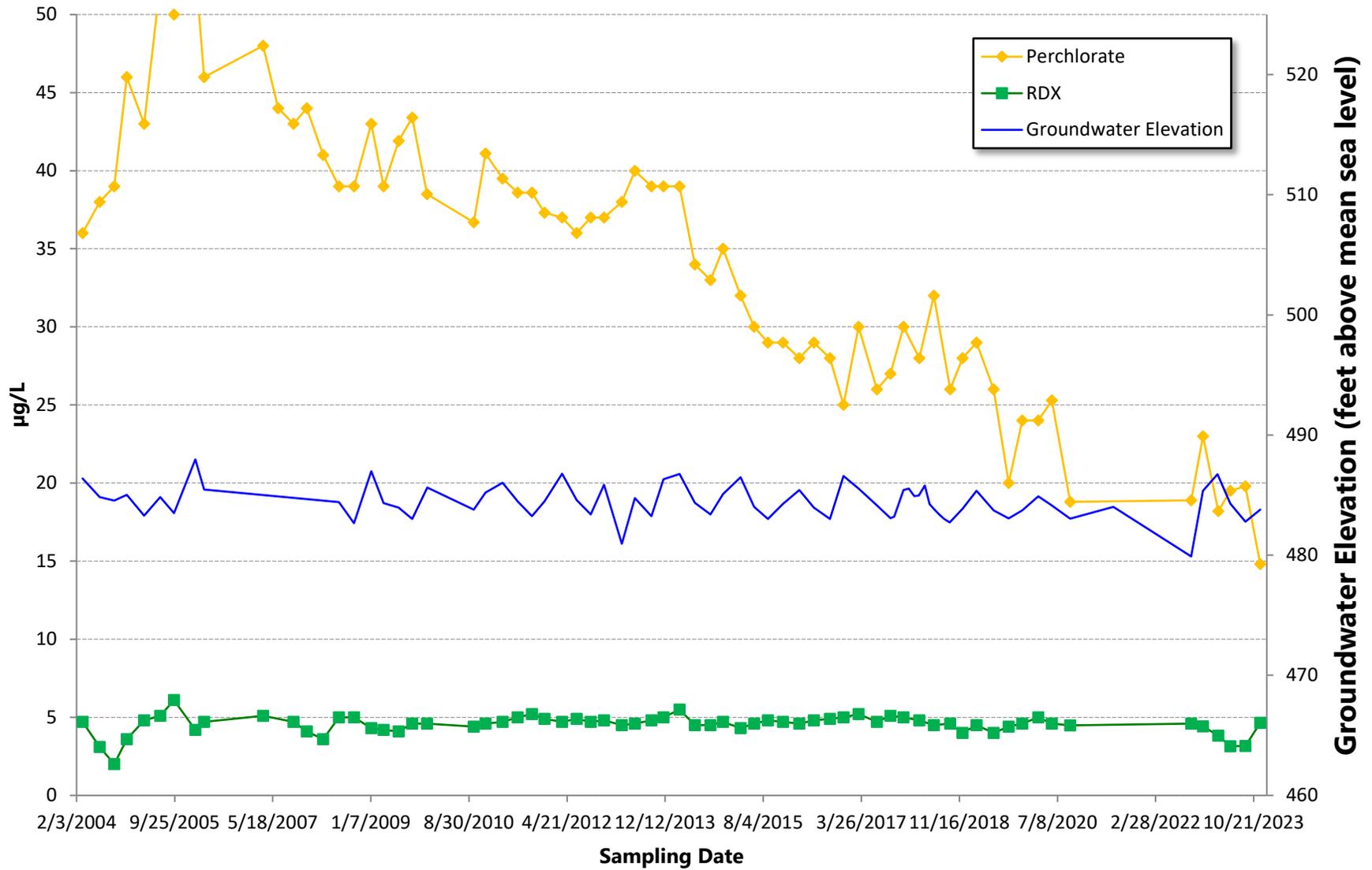
## Historical Groundwater Concentrations Camp Bonneville, Vancouver, Washington - Well L4-MW02B



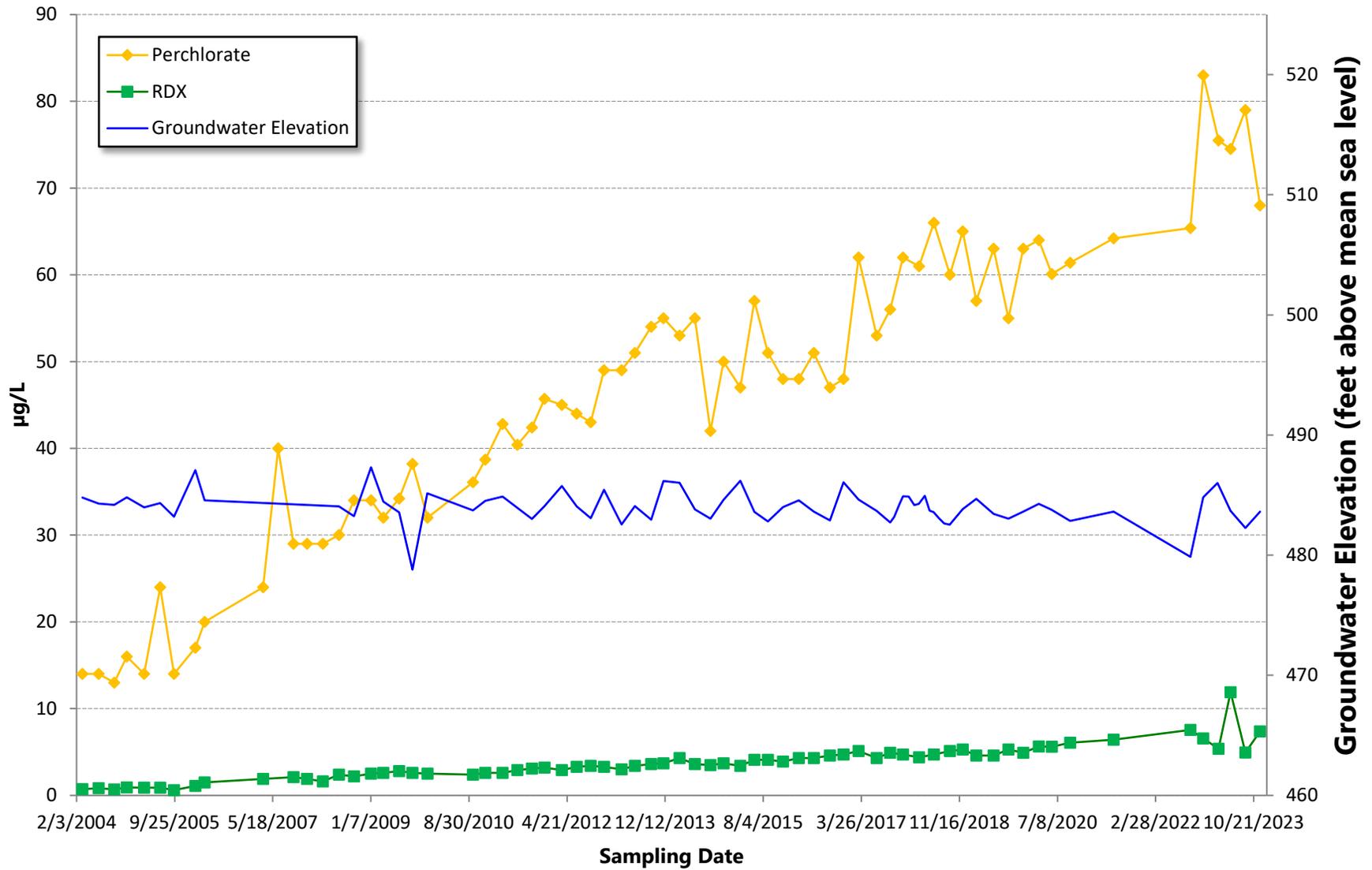
## Historical Groundwater Concentrations Camp Bonneville, Vancouver, Washington - Well L4-MW03A



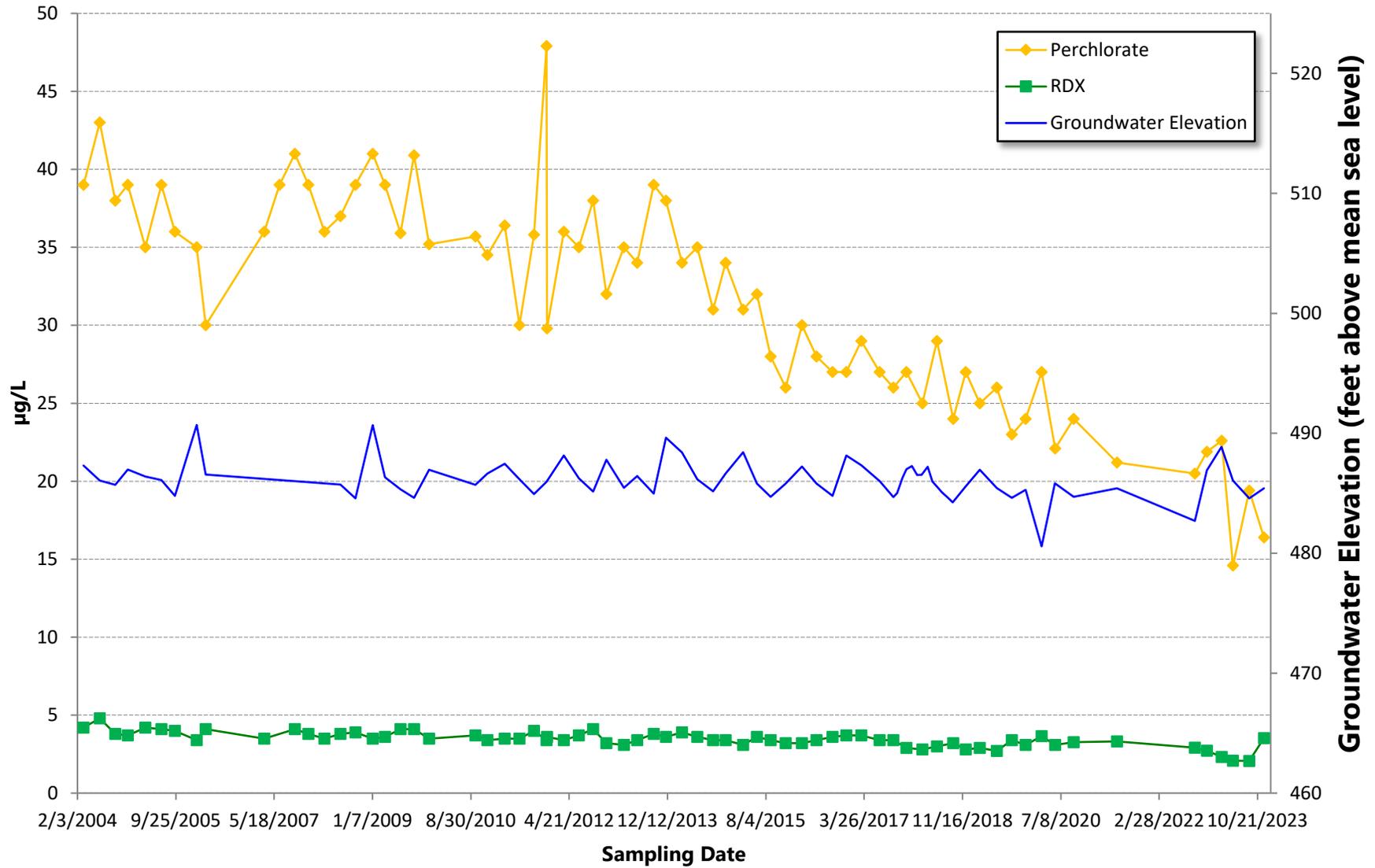
## Historical Groundwater Concentrations Camp Bonneville, Vancouver, Washington - Well L4-MW03B



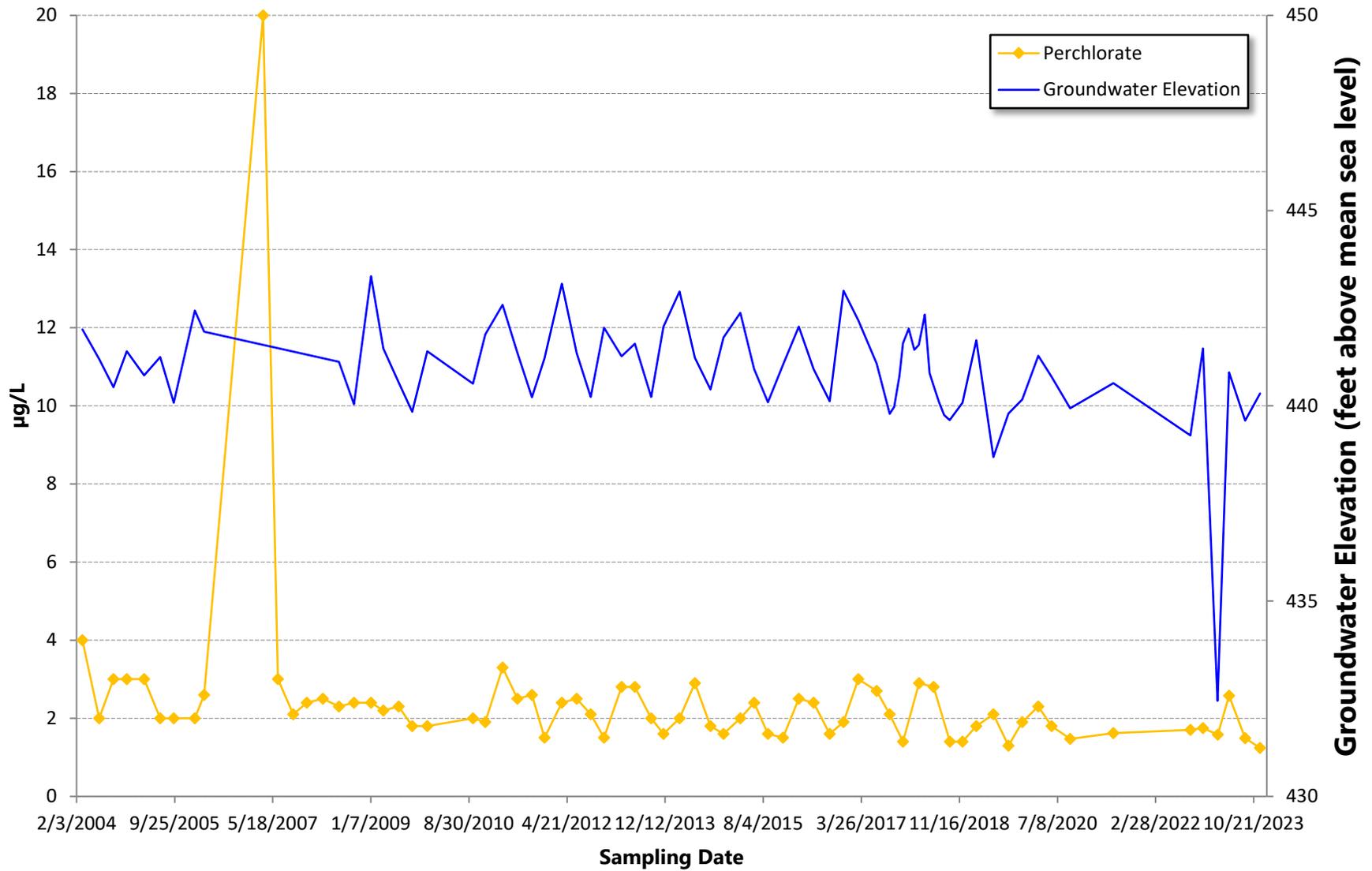
## Historical Groundwater Concentrations Camp Bonneville, Vancouver, Washington - Well L4-MW04A



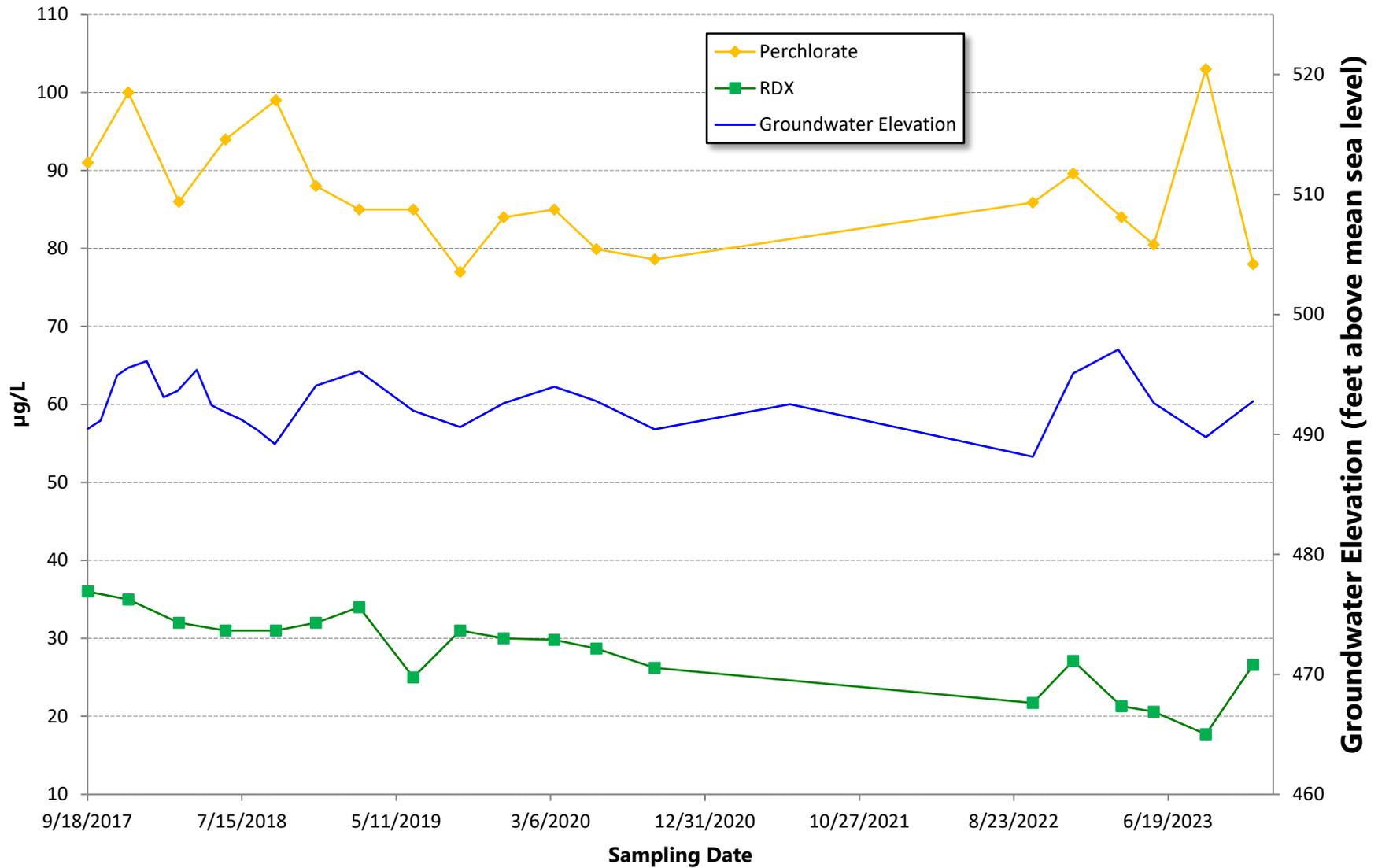
## Historical Groundwater Concentrations Camp Bonneville, Vancouver, Washington - Well L4-MW05A



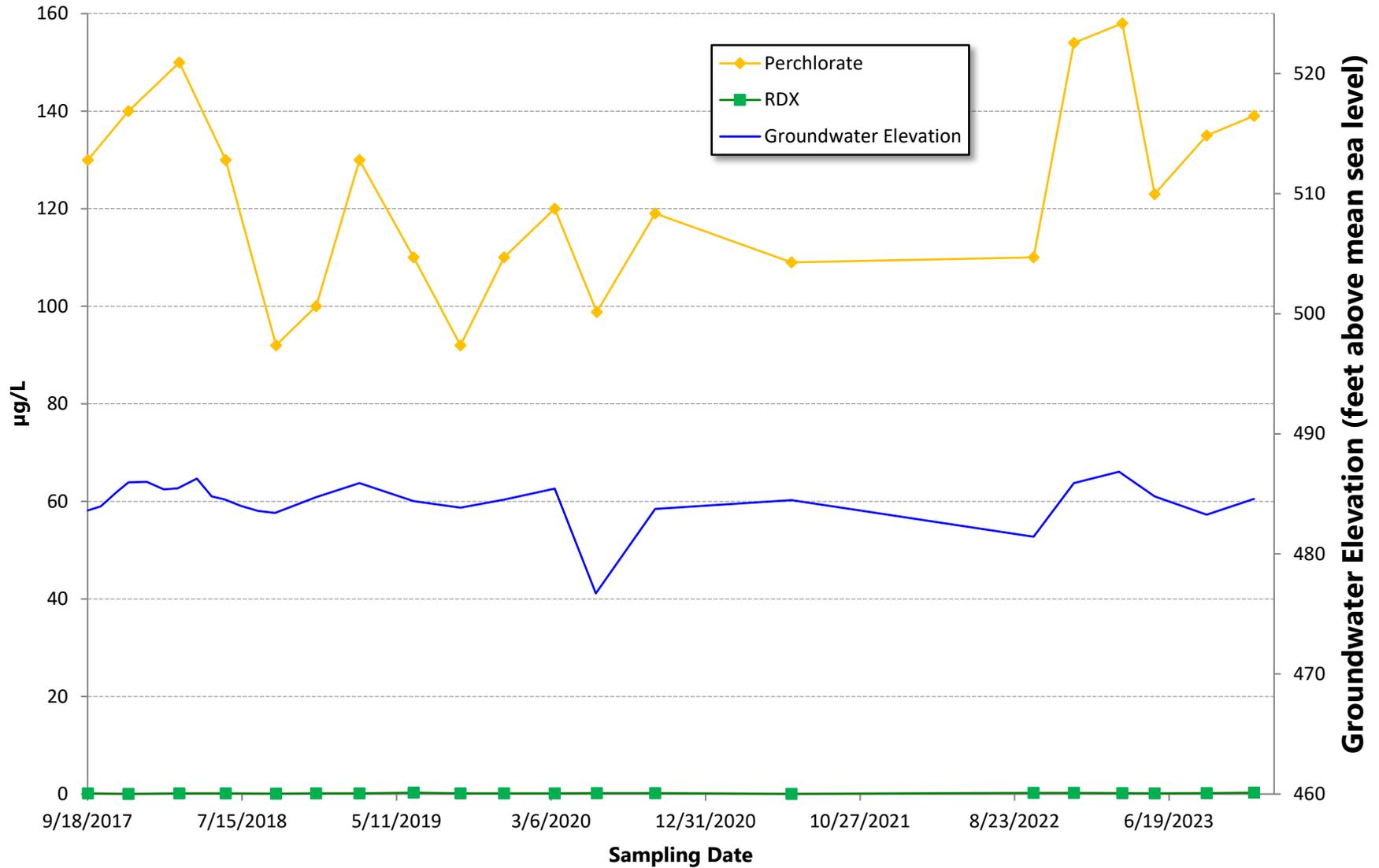
# Historical Groundwater Concentrations Camp Bonneville, Vancouver, Washington - Well L4-MW07B



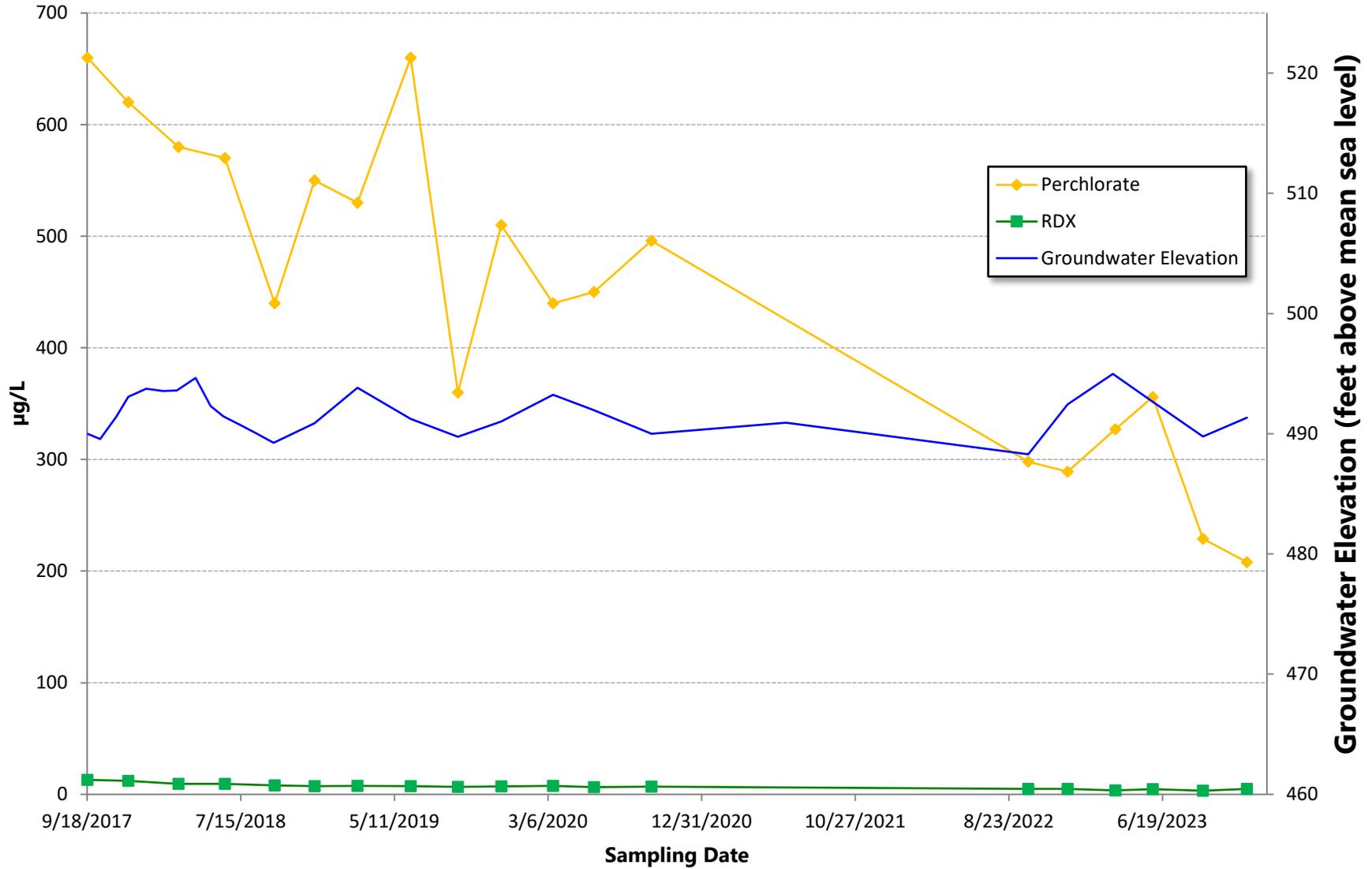
## Historical Groundwater Concentrations Camp Bonneville, Vancouver, Washington - Well L4-MW08A



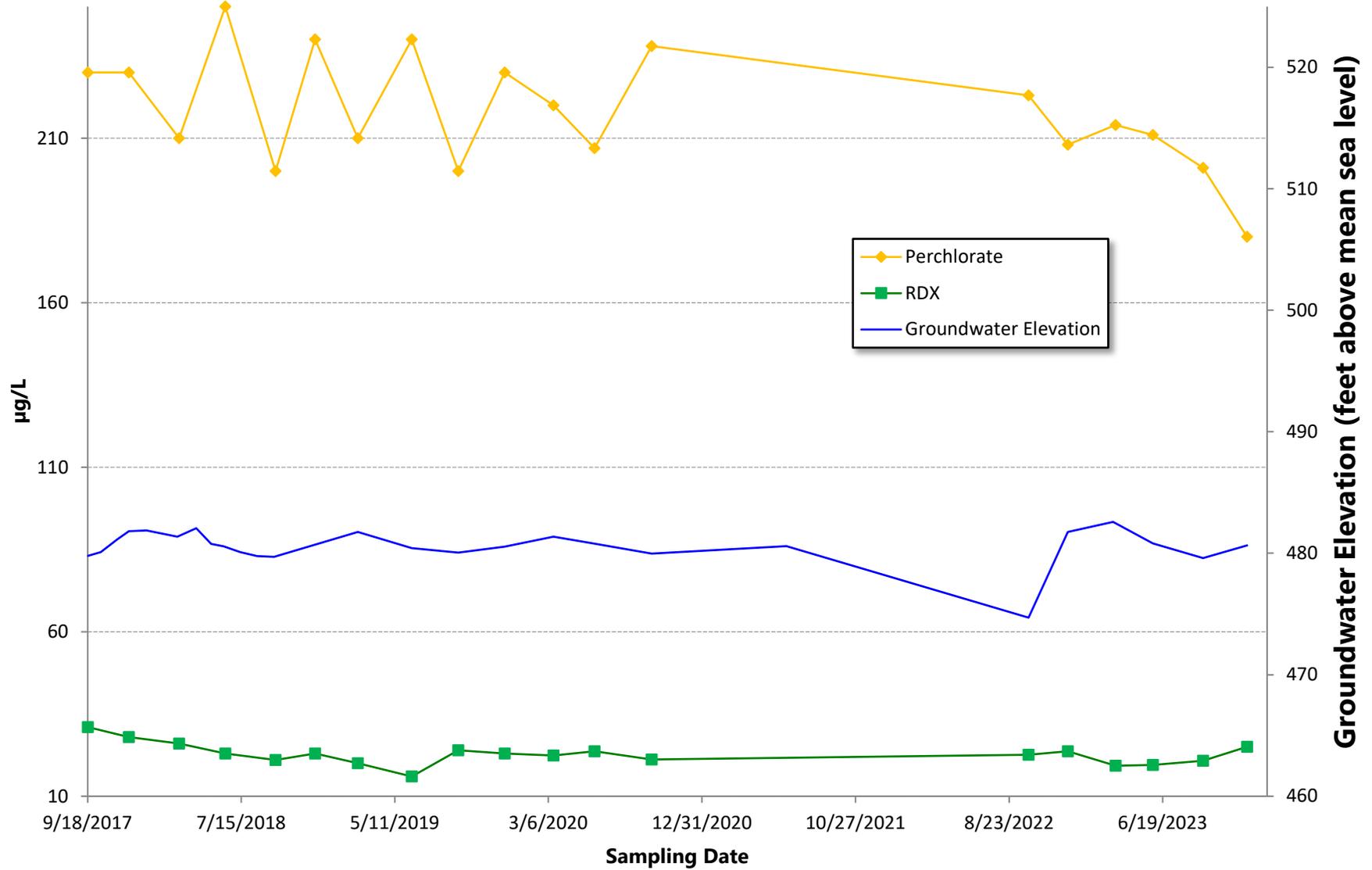
## Historical Groundwater Concentrations Camp Bonneville, Vancouver, Washington - Well L4-MW08B



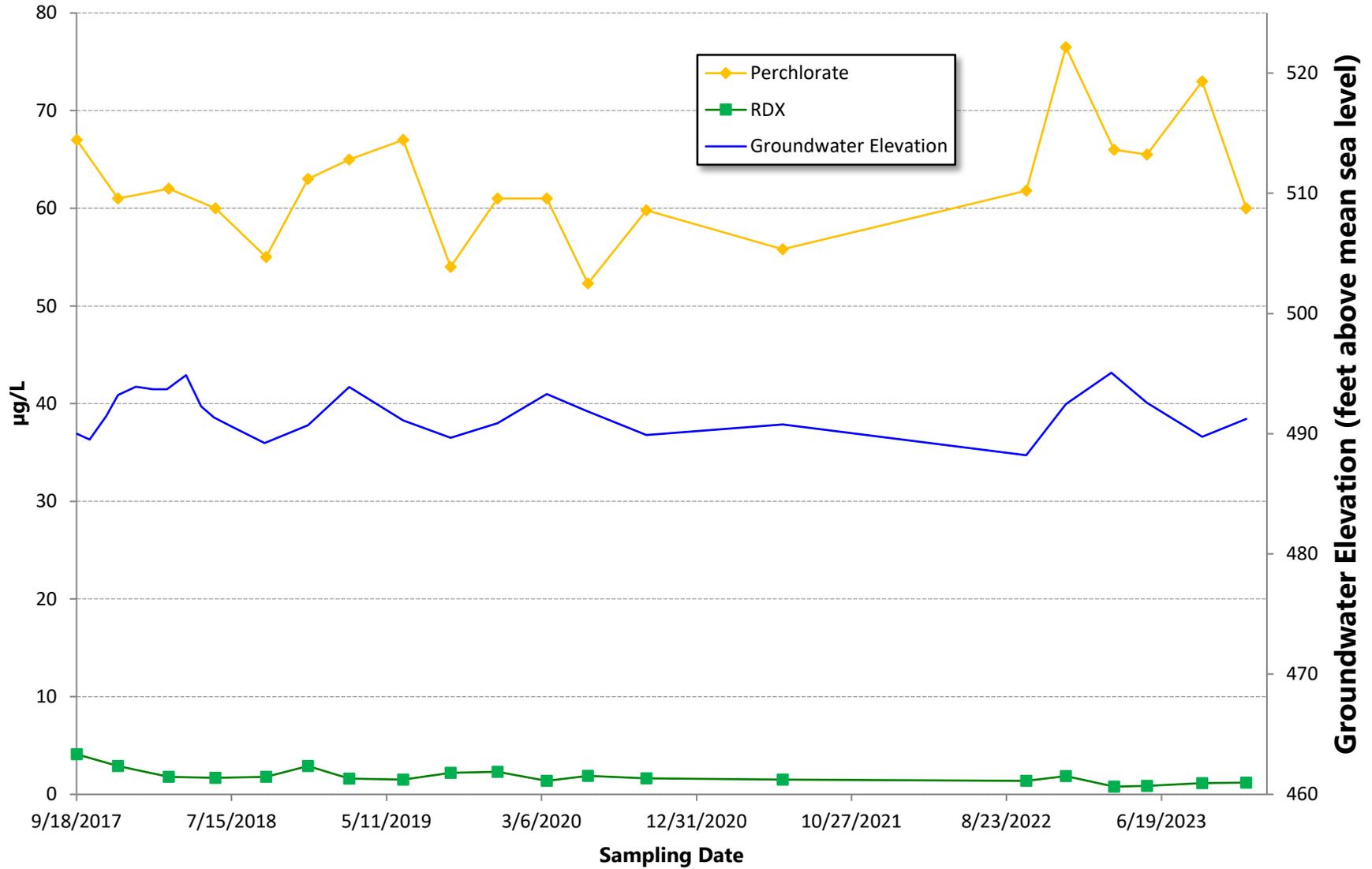
# Historical Groundwater Concentrations Camp Bonneville, Vancouver, Washington - Well L4-MW09A



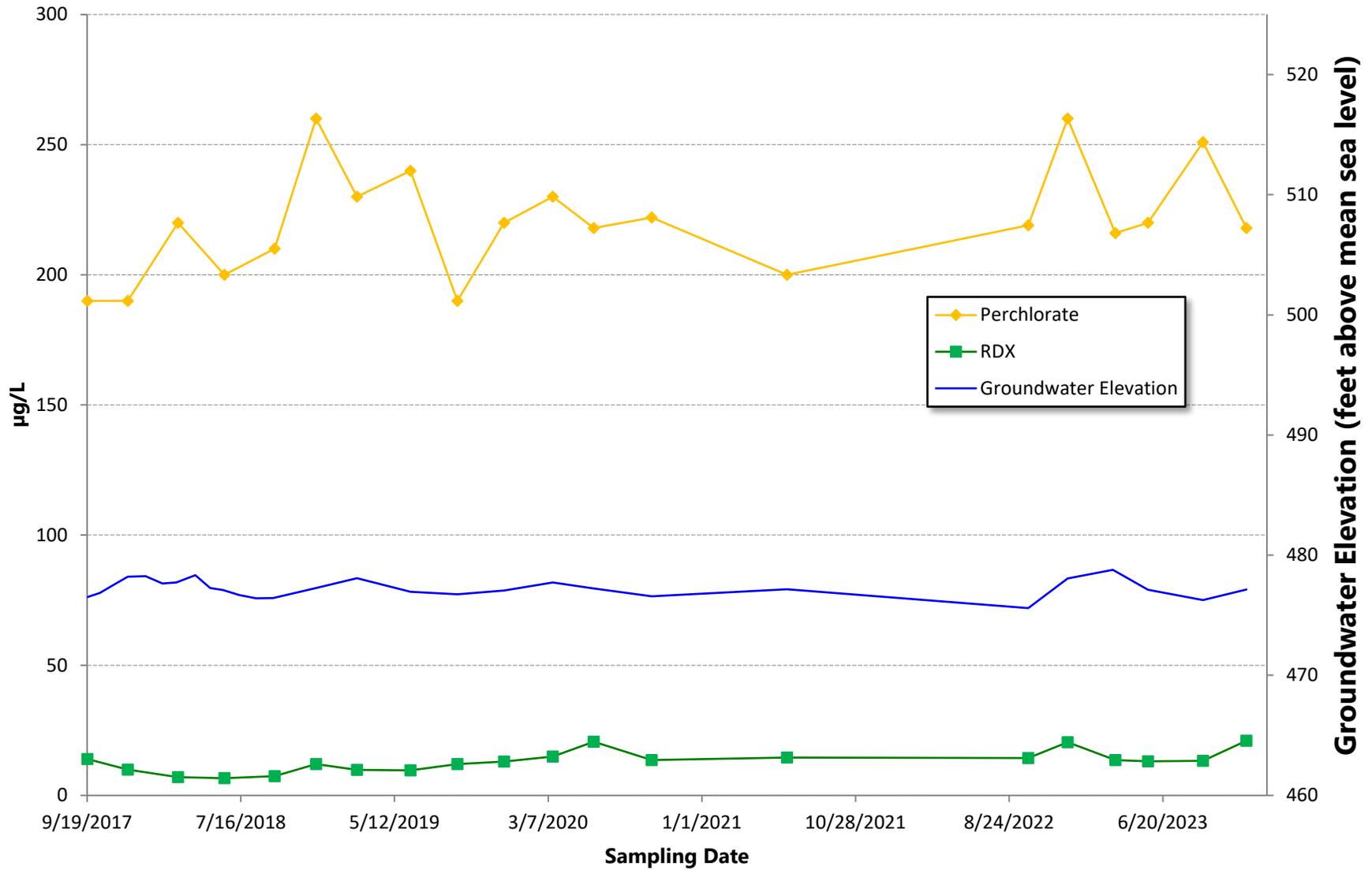
## Historical Groundwater Concentrations Camp Bonneville, Vancouver, Washington - Well L4-MW09B



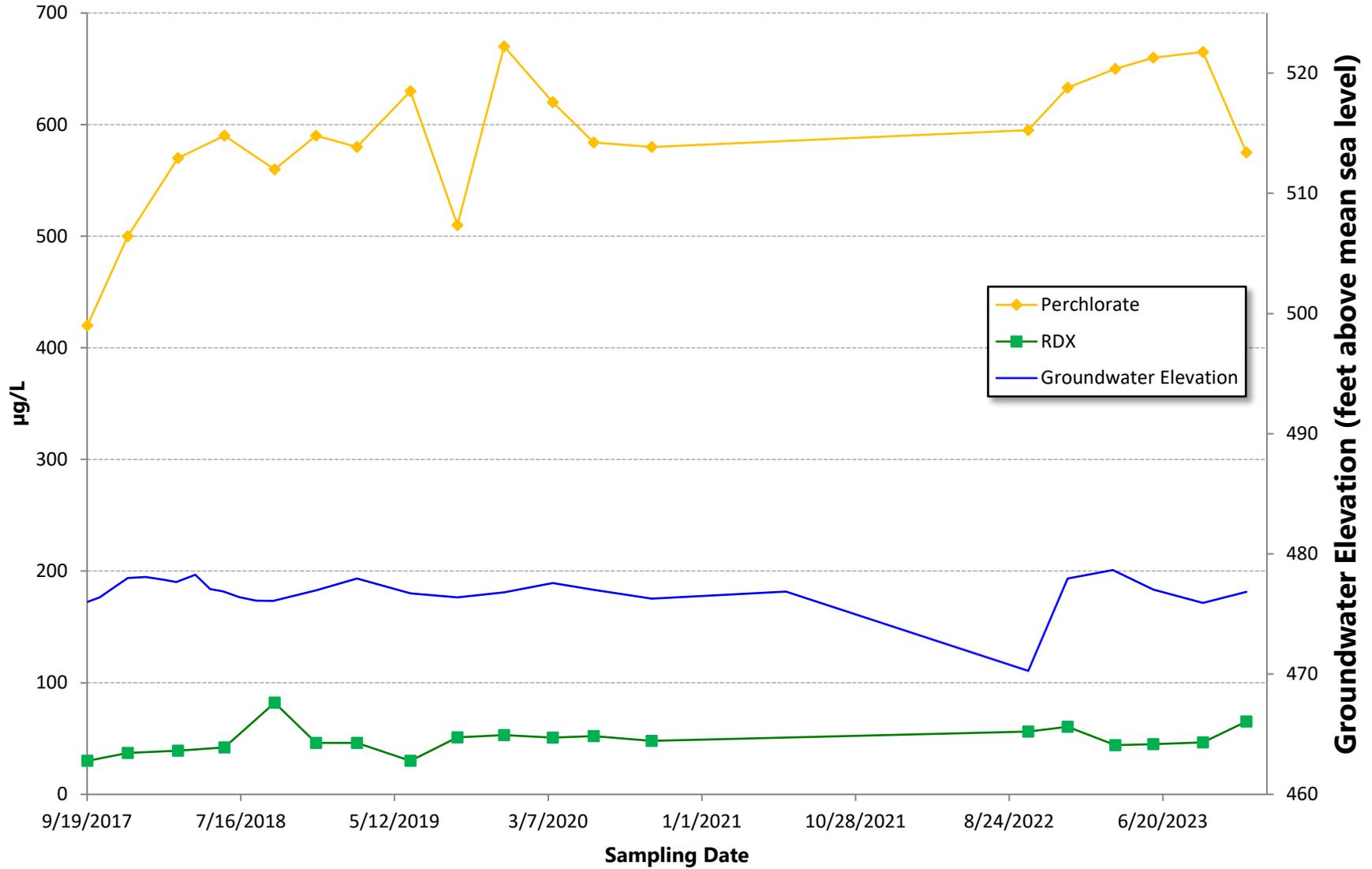
## Historical Groundwater Concentrations Camp Bonneville, Vancouver, Washington - Well L4-MW010A



## Historical Groundwater Concentrations Camp Bonneville, Vancouver, Washington - Well L4-MW010B



# Historical Groundwater Concentrations Camp Bonneville, Vancouver, Washington - Well L4-MW011B



# **Appendix H**

## **Statistical Analysis**

## Appendix H. Summary Statistics

Camp Bonneville, Vancouver, Washington

	Number of Samples	Number of Non-Detect Results	Percent Non-Detect Results	Maximum (µg/L)	Minimum (µg/L)	Mean (µg/L)	Median (µg/L)	Trend
L4MW01A								
Perchlorate	29	0	0%	10	1.3	3.0986	2.1	No Trend
RDX	29	14	48%	2.69	0.097	0.209	0.1	No Trend
L4MW01B								
Perchlorate	29	26	90%	0.52	0.5	0.5014	0.5	Negative
RDX	29	29	100%	0.094	0.094	0.094	0.094	NA
L4MW02A								
Perchlorate	29	0	0%	310	60	146.8103	153	No Trend
RDX	29	0	0%	11	2.74	6.6824	6.7	Negative
L4MW02B								
2,4-Dinitrotoluene	29	8	28%	0.58	0.098	0.3064	0.37	Negative
Perchlorate	29	0	0%	680	307	490.2069	520	Negative
RDX	29	0	0%	77	11.6	46.3	43	Negative
L4MW03A								
Perchlorate	29	0	0%	60	16.1	40.0724	43	Negative
RDX	29	0	0%	6.9	2.64	5.2638	5.3	Negative
L4MW03B								
Perchlorate	29	0	0%	32	14.8	25.4586	26	Negative
RDX	29	0	0%	5.2	3.15	4.5162	4.6	Negative

## Appendix H. Summary Statistics

Camp Bonneville, Vancouver, Washington

	Number of Samples	Number of Non-Detect Results	Percent Non-Detect Results	Maximum (µg/L)	Minimum (µg/L)	Mean (µg/L)	Median (µg/L)	Trend
L4MW04A								
Perchlorate	30	0	0%	83	47	60.5033	61.2	Positive
RDX	30	0	0%	11.9	3.4	5.2883	4.9	Positive
L4MW05A								
Perchlorate	30	0	0%	32	14.6	25.0233	26	Negative
RDX	30	0	0%	3.7	2.07	3.1157	3.2	Negative
L4MW07B								
Perchlorate	30	0	0%	3	1.24	1.941	1.8	Negative
RDX	30	30	100%	0.097	0.097	0.097	0.097	NA
L4MW08A								
Perchlorate	19	0	0%	103	77	87.0263	85	Negative
RDX	19	0	0%	36	17.7	28.2474	29.8	Negative
L4MW08B								
Perchlorate	20	0	0%	158	92	122.49	121.5	No Trend
RDX	21	3	14%	0.338	0.1	0.1732	0.16	Positive
L4MW09A								
Perchlorate	19	0	0%	660	208	451.2105	450	Negative
RDX	19	0	0%	13	3.25	7.1084	7.1	Negative

## Appendix H. Summary Statistics

Camp Bonneville, Vancouver, Washington

	Number of Samples	Number of Non-Detect Results	Percent Non-Detect Results	Maximum (µg/L)	Minimum (µg/L)	Mean (µg/L)	Median (µg/L)	Trend
<b>L4MW09B</b>								
1,1,2,2-Tetrachloroethane	19	1	5%	2.4	0.5	1.3616	1.32	Negative
Perchlorate	19	0	0%	250	180	218	214	Negative
RDX	19	0	0%	31	16	22.8	23	Negative
<b>L4MW10A</b>								
Perchlorate	20	0	0%	76.5	52.3	62.335	61.4	No Trend
RDX	20	0	0%	4.1	0.792	1.8225	1.67	Negative
<b>L4MW10B</b>								
Perchlorate	20	0	0%	260	190	220.2	219.5	No Trend
RDX	20	0	0%	21	6.6	13.03	13.2	Positive
<b>L4MW11B</b>								
Perchlorate	19	0	0%	665	420	583.7895	584	Positive
RDX	19	0	0%	82	30	48.6632	46.6	Positive